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DRAFT
Environmental Impact Report
Barber Yard Specific Plan Project
City of Chico, Butte County, California

State Clearinghouse Number 2023030641

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ADWF	Average Dry Weather Flow
AFY	acre-feet/year
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQAP	Air Quality Attainment Plan
AQMD	Air Quality Management District
ARB	California Air Resources Board
ARHPB	Architectural Review and Historic Preservation Board
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
BAU	business-as-usual
BCAG	Butte County Association of Governments
BCAQMD	Butte County Air Quality Management District
BCF	billion cubic feet
BCF/year	billion cubic feet per year

BEC	Butte Environmental Council
BHHE	Baseline Human Health Evaluation
BMP	Best Management Practice
BRA	Biological Resources Assessment
BVOC	biogenic volatile organic compound
BYSP	Barber Yard Specific Plan
C^2ES	Center for Climate and Energy Solution
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAGR	compound annual growth rate
CAL FIRE	California Department of Forestry and Fire Protection
Cal Water	California Water Service
Cal/EPA	California Environmental Protection Agency
Cal/OES	California Governor's Office of Emergency Services
Cal/OSHA	California Occupational Health and Safety Administration
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARD	Chico Area Recreation and Park District
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCDS	Chico Country Day School
CCR	California Code of Regulations
CCS	Carbon Capture and Sequestration
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CDR	Carbon Dioxide Removal
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-HIST	Historical CERCLIS
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFD	Chico Fire Department
CFR	Code of Federal Regulations

CH_4	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CPD	Chico Police Department
CPF	Cancer potency factor
CPG	Comprehensive Preparedness Guide
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Commission
CRA	Cultural Resources Assessment
CREC	Controlled Recognized Environmental Condition
CRHR	California Register of Historical Resources
CSUC	California State University, Chico
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CUSD	Chico Unified School District
CWA	Clean Water Act
CWPP	Community Wildfire Protection Plan
dB	decibel
dBA	A-weighted decibel
DBH	diameter at breast height
DOF	California Department of Finance
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
du	dwelling unit
du/acre	dwelling unit per acre
DWR	California Department of Water Resources
EDD	California Employment Development Department
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007

EMFAC	Emission factors
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
ESL	Environmental Screening Level
EV	electric vehicle
EVA	Emergency Vehicle Access
FAA	Federal Aviation Administration
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FERC	Federal Energy regulatory Commission
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection and Policy Act
FRA	Federal Responsibility Area
GGS	giant garter snake
GHG	greenhouse gas
GMP	Groundwater Management Plan
gpd	gallons per day
gpm	gallons per minute
GPR	ground penetrating radar
GPS	Global Positioning System
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWh	gigawatt-hours
GWh/y	gigawatt-hours per year
GWP	global warming potential
HAP	Hazardous Air Pollutants
HARP	Hotspots Analysis and Reporting Program
HCD	California Department of Housing and Community Development
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HI	hazard index
HIST UST	Historical Underground Storage Tank

HMRT	Hazardous Material Response Team
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRI	California Historic Resources Inventory
HVAC	heating, ventilation, and air conditioning
IBC	International Building Code
ICS	Incident Command System
IPaC	Information for Planning and Consultation
IPCC	United Nations Intergovernmental Panel on Climate Change
ISTEA	Intermodal Surface Transportation Efficiency Act
ITP	Incidental Take Permit
kW	kilowatts
LCFS	Low Carbon Fuel Standard
L_{dn}	day/night average sound level
LDV	Light-duty vehicle
LED	light-emitting diode
L_{eq}	equivalent sound level
LESA	Land Evaluation and Site Assessment
LEV	Low Emission Vehicle
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
LOS	Level of Service
LRA	Local Responsibility Area
LSE	load-serving entities
LUC	Land Use Covenant
MBTA	Migratory Bird Treaty Act
MDV	medium-duty vehicle
MEIR	Maximally Exposed Individual Resident
mg/kg	milligrams per kilogram
mgd	million gallons per day
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSL	mean sea level
MTS	Metropolitan Transportation System
MW	megawatt

MWD	Metropolitan Water District of Southern California
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NFRAP	No Further Remedial Action Planned
NHM	Natural History Museum of Los Angeles County
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NO_2	nitrogen dioxide
NOAA Fisheries	National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
NSVPA	Northern Sacramento Valley Planning Area
NTR	National Toxics Rule
NWIC	Northwest Information Center
O&M	Operations & Maintenance
O_3	ozone
OA	Operational Area
OAL	Office of Administrative Law
OEHHA	California Office of Environmental Health Hazard Assessment
OEM	Office of Emergency Management
OES	Office of Emergency Services
OHWM	ordinary high water mark
ONAC	Federal Office of Noise Abatement and Control
OSHA	Occupational Safety and Health Administration

PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pCi/L	picocuries per liter
PCP	pentachlorophenol
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PM	particulate matter
PM_{10}	particulate matter, including dust, 10 micrometers or less in diameter
$PM_{2.5}$	particulate matter, including dust, 2.5 micrometers or less in diameter
PM_x	particulate matter
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRMP	Park and Recreation Master Plan
PVC	polyvinyl chloride
PWS	Public Water System
PWWF	peal wet weather flow
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
Recology	Integrated Resource Recovery Company
RecycleSmart	Central Contra Costa County Solid Waste Authority
Regional San	Sacramento Regional County Sanitation District
REL	Reference Exposure Level
RHNA	Regional Housing Needs Allocation
RHNP	Regional Housing Needs Plan
RMP	Risk Management Plan
rms	root mean square
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RSL	Regional Screening Level
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SDMP	Soil and Debris Management Plan
SEMS	Standard Emergency Management System

SEP	State Emergency Plan
SF_6	sulfur hexafluoride
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations, and Cleanups
SNAP	California Significant New Alternatives Policy
SO_2	sulfur dioxide
SOI	Sphere of Influence
SORE	Small Off-road Engines
South Coast AQMD	South Coast Air Quality Management District
SPA	Special Planning Area
SR	State Route
SRA	State Responsibility Area
SSI	subsurface scanning investigation
SSL	Soil Screening Level
SSMP	Sewer System Management Plan
State Water Board	California State Water Resources Control Board
SVAB	Sacramento Valley Air Basin
SWCNIP	Southwest Chico Neighborhood Improvement Plan
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TCE	trichloroethylene
TCM	transportation control measures
TDM	Transportation Demand Management
TDS	total dissolved solids
TDV	Time Dependent Valuation
TEA-21	Transportation Equity Act for the 21st Century
Tg	teragram
therms/y	therms per year
TIA	Traffic Impact Analysis
TIS	Traffic Impact Study
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TNW	traditional navigable water
TOD	Transit Oriented Development
TPH-g	total petroleum hydrocarbons-gasoline

UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
Valley Air District	San Joaquin Valley Air Pollution Control District
VDECS	Verified Diesel Emission Control Strategies
VELB	Valley Elderberry Longhorn Beetle
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOC	volatile organic compounds
SATERS	Watershed Assessment, Tracking, and Environmental Results System
WDR	Waste Discharge Requirements
WPT	western pond turtle
WQMP	Water Quality Management Plan
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
WSS	Web Soil Survey
WWTP	Wastewater Treatment Plant
ZEV	Zero-Emission Vehicle

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EXECUTIVE SUMMARY

Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Barber Yard Specific Plan Project (State Clearinghouse No. 2023036041). This document is prepared in conformance with CEQA (Public Resources Code [PRC] § 21000, *et seq*.) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et se*q.).

The purpose of this Draft EIR is to inform decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

Project Summary

Project Location

The project site is located in the City of Chico, Butte County, California. The City is located approximately 90 miles north of Sacramento and 30 miles east of Interstate 5 (I-5). The approximately 133-acre BYSP Area is located in the southern portion of the City, as shown in Exhibit 2-2a. Eight Assessor Parcel Numbers (APNs) comprise the BYSP Area: 039-400-016 (partial), 039-400-024, 039-400-025, 039-400-026, 039-400-050, 039-400-051, 039-400-052, and 039-400-053. The BYSP Area is bounded by various individual properties to the northwest, Chestnut Street and Normal Avenue to the northeast, Estes Road to the east, and Union Pacific Railroad (UPRR) to the southwest. To the south, the BYSP Area is bounded by a portion of Butte County that is unincorporated, including a decommissioned UPRR spur. Agricultural and rural residential areas lie to the south and west across the UPRR.

The approximately 13.5-acre off-site improvement area is located directly south of the BYSP Area, in unincorporated Butte County, on APN 039-410-025 and at the southern tip extent of APN 039-410-039 at Comanche Creek. The off-site improvement area is bounded by a Pacific Gas and Electric Company (PG&E) parcel to the north, rural residential and agricultural land uses to the east, agricultural land and Comanche Creek to the south, and the UPRR as well as more rural residential and agricultural land uses to the west. The BYSP Area is generally flat and is fenced to prevent public access.

The Land Use Element includes descriptions of the City's land use designations and designates the BYSP Area as a "Special Planning Area" (SPA), specifically "SPA-2–Barber Yard." The BYSP Area is zoned SPA by the Chico Zoning Ordinance.

Project Description

The proposed project consists of the full buildout of the BYSP, including off-site improvements, resulting in a mixed-use community accommodating a diverse range of housing opportunities with a mix of commercial, recreational and office uses located throughout. The types of housing products envisioned include single-family detached, pocket neighborhoods, bungalow courts, duplexes, townhouses, garden apartments, and apartments over commercial, as detailed more fully in the Specific Plan. Depending on the location within the BYSP Area, residential density would range from 4 to 35 units per gross acre. A total of approximately 210,000 square feet of commercial space is envisioned upon buildout, including approximately 150,000 square feet of adaptive reuse space from the three existing on-site buildings, would be available. Overall, for the purposes of this Draft EIR, the following mix of uses has been conservatively assumed: commercial uses would consist of 130,000 square feet of health/fitness club use, 40,000 square feet of retail plaza use, 22,800 square feet of restaurant use, and 17,200 square feet of event center use.

At full buildout, a variety of potential future park, recreational, and open space amenities are contemplated by the BYSP including the Barber Pop-up, Social Hub, Diamond at Barber Yard, Athletics Facility, Dog Park, Picnic Grove, Ruins Park, and various neighborhood parks (e.g., the Yard). The open space network within the BYSP is designed to provide, at full buildout, opportunities for a wide array of active and passive recreation uses to help meet the range of needs within the proposed project and broader community. In addition, the BYSP would preserve in perpetuity the approximately 3-acre asphalt cap area which would remain as open space, with the only additional permitted uses being ancillary surface parking and those other uses allowed by California Department of Toxic Substances Control (DTSC).

Located within the approximately 16-acre off-site improvement area (Exhibit 2-2a and 2-2b), a combination water quality retention/detention basin (stormwater basin), access drive from Estes Road, and an associated storm drain alignment would be constructed to connect the BYSP Area and stormwater basin to a new outfall to Comanche Creek.[8] At this time, two potential storm drain alignment options are being considered, as shown on Exhibit 2-2b, and both alignment options are evaluated in this Draft EIR for purposes of conservative analysis, although only one would ultimately be developed. Alignment Option 1 would travel directly southeast from the stormwater basin to Comanche Creek within APN 039-410-039. Alignment Option 2 would traverse eastward from the stormwater basin to Estes Road where it would then turn south to Comanche Creek.

The proposed project would connect to existing utilities to the northwest, northeast, east, and south of the BYSP Area. Potable water service would be provided by California Water Service (Cal Water), and wastewater and stormwater services would be provided by the City of Chico. The City's franchised waste and recycling hauler for the BYSP Area is North Valley Waste Management. Electricity and natural gas services would be provided by Pacific Gas and Electric Company (PG&E).

Project Objectives

The objectives of the proposed project are to:

- Develop the BYSP in an economically viable manner as an extension of the Barber Neighborhood.

- Preserve and celebrate the BYSP Area's rich history to foster a strong sense of place.
- Direct development in proximity to and with connections to the existing Barber Neighborhood, Downtown, and Chico State, supporting the efficient use of land through higher density.
- Create a wide range of housing opportunities and choices that are generally smaller than the average unit size in Chico and focused on providing options to broad segments of the community.
- Encourage a variety of transportation choices, including access to public transit, support for people-powered modes, and accommodation of emerging technologies.
- Create walkability throughout the BYSP Area and with connections to the surrounding neighborhood.
- Encourage a mix of land uses including a central Social Hub for new residents, the broader neighborhood, and the Chico community.

Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Air Quality:** Conflict or obstruction of implementation of the applicable air quality plan.
- **Air Quality:** Cumulatively considerable net increase of any criteria pollutant.
- **Air Quality**: Cumulative air quality impacts.

Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the proposed project.

No Project/No Development Alternative

Under the No Project Alternative, the project site would remain unchanged, and no new development would occur on the project site for the foreseeable future.

Reduced Intensity Alternative

Under the Reduced Intensity Alternative, the 60,000 square feet of commercial uses would not be constructed: 30,000 square feet would be reduced from the fitness club, 20,000 square feet would be removed from the retail plaza, and 10,000 square feet would be removed from restaurants compared to the proposed project. Instead, this alternative would construct additional single-family homes throughout the site with alleyways, increasing the provision of housing within the BYSP Area by up to 30 units totaling approximately 40,000 square feet. The proposed 150,000 square feet of adaptive reuse of the Warehouse, Engineering Building, and Shop would remain. Off-site improvements would be similar to the proposed project.

On-site Stormwater Basin Alternative

Under the On-site Stormwater Basin Alternative, the BYSP Area would be developed similar to that of the proposed project but with an on-site stormwater basin and reduction in residential units. The basin would be constructed on-site in the vicinity of the BYSP-0S1 (Restricted Use) area in the southern portion of the BYSP Area. A connecting storm drain alignment would connect the on-site stormwater basin to an outfall in Comanche Creek, in a location similar to that of the proposed project. To accommodate the on-site stormwater basin, this alternative would require a reduction in residential units of approximately 154 units. Proposed commercial square footage would remain consistent with the proposed project at 210,000 square feet inclusive of the adaptive reuse of existing buildings. Development within the off-site improvement area would not occur with except for the construction of a linear storm drain alignment connecting to Comanche Creek.

Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on April 12, 2023. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from March 25, 2023 through May 9, 2023. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics, Light, and Glare
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the City of Chico is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the

public and decision-makers to make an informed judgment about the environmental consequences of the proposed project.

Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft EIR:

- Transportation and alternative transportation options
- Traffic increase
- Greenhouse Gas Emissions
- The Asphalt Cap and toxic waste disruption
- The UPRR Railroad crossing and associated noise impacts
- Construction noise impacts
- Parking availability
- Light trespass and pollution
- Aesthetics and architectural design
- Biological resources and habitat loss
- Utilities and increased demand on wastewater and stormwater systems

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision-makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision-makers are not obligated to select the most environmentally preferable viewpoint. Decision-makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision-makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision-makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

Public Review of the Draft EIR

Upon completion of the Draft EIR, the City of Chico filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at the City of Chico offices. The address is provided below:

M-F, 8:00 a.m.–12:00 p.m., 1:00 p.m.–5:00 p.m.
City of Chico
411 Main Street
Chico, CA 95927
Phone: 530.879.6812

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

City of Chico
Mike Sawley, Principal Planner
411 Main Street
Chico, CA 95927
Phone: 530.879.6812
Email: mike.sawley@chicoca.gov

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the City of Chico on the project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Table ES-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.1—Aesthetics, Light, and Glare		
Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.	None required.	Less than significant impact.
Impact AES-2: The proposed project would not conflict with applicable urban zoning and other regulations governing scenic quality.	None required.	Less than significant impact.
Impact AES-3: The proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.2—Agriculture and Forest Resources		
Impact AG-1: The proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use but would not result in a significant impact based on the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation.	None required.	Less than significant impact.
Impact AG-2: The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract.	None required.	Less than significant impact.
Impact AG-3: The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 3.3—Air Quality		
Impact AIR-1: The proposed project would conflict with or obstruct implementation of the applicable air quality plan.	Implement MM AIR-2.	Significant and unavoidable impact.
Impact AIR-2: The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.	Implement MM ENER-1 and: **MM AIR-1:** Prior to issuance of subdivision improvement plans for each phase of construction within the project site, the developer shall provide to the City's Community Development Director, for City review and approval, reasonable documentation that demonstrates the use of construction equipment that meets or exceeds United States Environmental Protection Agency (EPA) or California Air Resources Board (ARB) Tier 4 Final off-road emission standards for all off-road equipment with engines greater than 50 horsepower, if available. This requirement shall be included as construction notes on all relevant construction plans and permits (e.g., grading plan, building permit) for the subject specific individual development proposal. The relevant construction contractor shall maintain records concerning its efforts to comply with this requirement during construction, including equipment rental lists. If Tier 4 equipment is not available, the subject applicant shall reasonably document to the City's Community Development Director the basis for its unavailability and instead shall ensure that all off-road diesel-powered equipment greater than 50 hp shall meet EPA Tier 3 emissions standards. All Tier 3 equipment shall be outfitted with Best Available Control Technology (BACT) devices including an ARB certified Level 3 Diesel Particulate Filter or equivalent. **MM AIR-2: Purchase Offsets.** Prior to the City's approval of a final map for an application for a specific individual development proposal within the BYSP Area which would result in project-wide emissions exceeding 25 lbs/day of ROG, the subject project developer shall participate in an Off-site Mitigation Program, based on the Butte County Air Quality Management District (BCAQMD) CEQA Handbook, by paying the equivalent amount of money, which is equal to the contribution of pollutants (ROG) for the subject application which exceeds the BCAQMD thresholds of significance. Final details are to be approved by the BCAQMD and City for calculating the	Less than significant impact (construction). Significant and unavoidable impact (operation).

Impacts	Mitigation Measures	Level of Significance After Mitigation
	payments to the Off-site Mitigation Program due by each specific individual development proposal pursuant to this MM AIR-2.	
Impact AIR-3: The proposed project could expose sensitive receptors to substantial pollutant concentrations.	**MM AIR-3: Implement BCAQMD Best Management Practices During Construction** The following Best Management Practices (BMPs), as recommended by the Butte County Air Quality Management District (BCAQMD), shall be included in the design of all development contemplated by the proposed project and implemented during all construction: • Reduce the amount of the disturbed area where possible. • Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (nonpotable) water should be used whenever possible. • All dirt stockpile areas should be sprayed daily as needed, covered, or a District approved alternative method will be used. • Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities. • Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established. • All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the District. • All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used. • Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site. • All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site. • Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible. • Post a sign in a prominent location visible to the public with the telephone numbers of the contractor and District for any questions or concerns about dust from the project. • All fugitive dust mitigation measures required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.	
Impact AIR-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	None required.	Less than significant impact.
Cumulative Impact	Implement MM AIR-1, MM AIR-2, MM AIR-3, and MM ENER-1.	Significant and unavoidable impact (operational criteria pollutants). Less than significant impact (all other impact areas).
Section 3.4—Biological Resources		
Impact BIO-1: The proposed project could have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.	**MM BIO-1a:** Pre-construction Surveys for Swainson's Hawk (BYSP and Southern Study Area) Prior to City (or County) approval of subdivision improvement plans or grading permits for ground disturbance for any individual development phase (within the BYSP or Southern Study Area) that occurs during the nesting season for Swainson's hawk, the developer shall hire a qualified Biologist to conduct Swainson's hawk nesting surveys within a 0.5-mile	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	radius of the subject area to determine whether there are any nests and if so, whether they are occupied. Occupancy shall be determined through observation of all accessible areas, including from public roads or other publicly accessible observation areas, of Swainson's hawk activity (e.g., foraging or nesting) on and near the project site. If construction halts but does not cease for more than 1-year, general nesting bird surveys as described in MM BIO-6 are recommended for subsequent nesting seasons. However, if construction ceases for more than 1-year, Swainson's hawk pre-construction surveys in their entirety (as articulated in MM BIO-1a and 1b) must be repeated. The qualified Biologist shall follow the survey protocol outlined in the California Department of Fish and Wildlife (CDFW) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* [1], which recommends surveys for at least two defined periods prior to construction, according to the following schedule: I. January–March 20: Conduct one survey total. Survey shall be conducted all day. II. March 20–April 5: Conduct three surveys total. Surveys shall be conducted between sunrise to 10:00 a.m. and 4:00 p.m. to sunset. III. April 5–April 20: Conduct three surveys total. Surveys shall be conducted between sunrise to 12:00 p.m. and 4:30 p.m. to sunset. IV. April 21–June 10: Avoid initiation of surveys during this period V. June 10–July 30: (post-fledging) Conduct three surveys total. Surveys shall be conducted between sunrise to 12:00 p.m. and 4:00 p.m. to sunset. **MM BIO-1b**: Swainson's Hawk Avoidance and Minimization (BYSP and Southern Study Area)	Less than significant impact.

[1] California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Sacramento, CA: Swainson's Hawk Technical Advisory Committee. May 31, 2000. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline. Accessed March 19, 2024.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	If Swanson's hawk nests are located pursuant to MM BIO-1a and determined to be occupied, minimization measures shall be implemented by the developer for any individual development phase (within the BYSP or Southern Study Area) in connection with the subject individual development phase as follows: 1. Construction activities shall be prohibited within 200 yards (600 feet) of active and occupied Swainson's hawk nest(s), or within 200 yards (600 feet) of nests under construction, to prevent nest abandonment.[2] 2. Notwithstanding the foregoing, if site-specific conditions or the nature of the construction activity (e.g., other nearby development, steep topography, dense vegetation, limited activities) indicate that a smaller buffer, or no buffer at all, could be used, the project applicant may seek approval from the qualified Biologist who in coordination with the California Department of Fish and Wildlife (CDFW) shall determine the appropriate buffer size, which, once approved, shall govern. 3. No tree containing an active Swainson's hawk nest shall be removed or altered; provided, however, once the nest is no longer occupied, said tree may be removed, subject to compliance with applicable provisions of the City of Chico's Tree Preservation Ordinance. **MM BIO-2: Pre-construction Surveys for Burrowing Owl (BYSP and Southern Study Area)** Prior to City (or County) approval of subdivision improvement plans or grading permits for ground disturbance for any individual development phase (within the BYSP and Southern Study Area), the developer shall hire a qualified Biologist to perform a pre-construction burrowing owl survey to determine burrow locations within 30 days prior to construction activities in connection with each individual development phase using applicable California Department of Fish and Wildlife (CDFW) Guidelines. Surveys for occupied burrows shall be completed within all construction areas in	Less than significant impact.

[2] California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Sacramento, CA: Swainson's Hawk Technical Advisory Committee. May 31, 2000. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline. Accessed March 19, 2024.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	connection with the subject individual development phase and within 300 feet of the subject impact area (where feasible and appropriate based on locations of barren or ruderal habitats). At least 15 days prior to the expected start of any project-related ground disturbance activities in connection with the subject individual development phase, or the restart of activities related thereto, the relevant developer shall provide a burrowing owl survey report with mapping exhibits to the CDFW. If no burrowing owl are detected during the pre-construction survey, no further action in connection with the subject individual development proposal is necessary. If burrowing owl are detected during the pre-construction survey, the following actions shall be taken to offset impacts during construction in connection with the subject individual development proposal (as outlined in the CDFW 2012 Guidelines): • During the nonbreeding season (September 1 through January 31), no disturbance shall occur within an approximately 160-foot radius of an occupied burrow. During the nesting season (February 1 through August 31), occupied burrows shall not be disturbed within a 300-foot radius unless a qualified Biologist approved by the CDFW verifies through non-invasive methods that either (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. • If owls must be moved away from the disturbance area, passive relocation techniques (as outlined by the CDFW [i.e., use of one-way doors]) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and to allow the owls to acclimate to alternate burrows. • If unpaired owls or paired owls are present in or within 300 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction. A CDFW-approved exclusion plan shall be required to implement this measure.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• If paired owls are nesting in areas scheduled for disturbance or degradation, there shall be a minimum 300-foot buffer from the nest(s) from February 1 through August 31 or until fledging has occurred. Outside of the time period of February 1 through August 31 or following fledging, owls may be passively relocated. **MM BIO-3a: Valley Elderberry Longhorn Beetle Avoidance and Minimization Measures (Southern Study Area)** Prior to City or County approval of subdivision improvement plans or grading permits for ground disturbance to construct the new outfall to Comanche Creek located within the Southern Study Area, the developer shall list the following measures on the relevant construction plans and hire a qualified Biologist to ensure adherence to the following measures during construction: • **Dust Control and Fencing.** Above and along top of bank of Comanche Creek and between the off-site elderberry cluster and the subject construction site in connection with the proposed outfall, a dust screen shall be installed at a sufficient width and height as defined by a qualified Biologist to prevent excessive construction-generated dust from reaching the elderberry cluster in question. At a minimum, the dust screen shall be 100 feet wide and 6 feet tall. • **Avoidance area.** Construction activities that may damage or kill the off-site elderberry cluster (e.g., trenching, paving, etc.) shall implement an avoidance area of at least 6 meters (20 feet) from the drip line of the subject elderberry cluster, depending on the type of activity, as determined by a qualified Biologist. • **Worker education.** Prior to ground disturbance associated with the construction of the stormwater outfall, a qualified Biologist shall provide training for all contractors, work crews, and any on-site personnel on the status of the valley elderberry longhorn beetle (VELB), its host plant and habitat, the need to avoid damaging the off-site elderberry cluster, and the possible penalties for noncompliance. • **Construction monitoring.** A qualified Biologist shall monitor the work area associated with the construction of the stormwater outfall at least once per day during outfall construction to ensure that all required	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	avoidance and minimization measures are implemented. The amount and duration of monitoring shall depend on the project specifics and may be reduced with concurrence from the United States Fish and Wildlife Service. • **Timing.** To the extent feasible, all construction activities that could occur within 50 meters (165 feet) of the off-site elderberry cluster, shall be conducted outside of the flight season of the VELB (March 1–July 30). **MM BIO-3b: Transplant Directly Impacted On-Site Elderberry Shrub (BYSP Area)** Prior to City approval of subdivision improvement plans or grading permits for ground disturbance to develop the future lot containing the one elderberry shrub identified within the BYSP Area, the developer of the specific development proposal that involves the removal of the elderberry shrub shall transplant the elderberry shrub, including removal of the entire root ball, if feasible, as part of the transplant process. The elderberry shrub shall be relocated adjacent to the project footprint if, as determined by a qualified Biologist: (1) the planting location is suitable for elderberry growth and reproduction; and (2) the subject developer is able to protect the shrub after transplantation via protection fencing or buffers until it is ensured that the shrub becomes reestablished. If these criteria cannot be met, the shrub shall be transplanted to an appropriate USFWS-approved mitigation site. Provided, however, that if a qualified Biologist determines that the elderberry shrub is unlikely to survive transplanting because of poor condition or location, or the shrub would be extremely difficult to move because of access problems, then the elderberry shrub shall not be transplanted and no further mitigation under this MM BIO-3b shall be required. The following transplanting guidelines shall be used by the subject developer in implementing this mitigation measure: • **Monitor**. A qualified Biologist shall be on-site for the duration of transplanting activities to assure compliance with this mitigation measure.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• **Exit Holes**. Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted shall be reported to the USFWS and to the California Natural Diversity Database (CNDDB). • **Timing**. Any transplanting of the elderberry shrub shall occur when the shrub is dormant (November through the first two weeks in February) and after it has lost its leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success. • **Transplanting Procedure**. Any transplanting shall follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (http://www.tcia.org/). **MM BIO-3c: Compensatory Mitigation for Valley Elderberry Longhorn Beetle Impacts (BYSP Area)** Prior to City approval of subdivision improvement plans or grading permits that will result in the removal or disturbance of the one elderberry shrub located within the BYSP Area, the subject developer shall compensate for the loss of the shrub by purchasing one credit (1,800 square feet or 0.041 acre) of Valley elderberry longhorn beetle (VELB) habitat at a mitigation bank approved by the United States Fish and Wildlife Service (USFWS). This compensatory mitigation is in addition to the transplanting requirement of MM BIO-3b. However, since it is within the purview of the USFWS to determine the appropriate type and amount of compensatory mitigation for impacts to VELB habitat, this mitigation measure shall be fulfilled upon the developer meeting final elderberry shrub mitigation requirements as determined by the USFWS. **MM BIO-4: Avoidance and Minimization Measures for Giant Garter Snake (Southern Study Area)** The giant garter snake (GGS) is unlikely to migrate to the BYSP Area from Comanche Creek, so the following avoidance and minimization measures for this species only apply to activities within the Southern Study Area. Prior to County approval of improvement plans or grading permits for the	Less than significant impact. Less thank significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	construction of the new outfall to Comanche Creek, the following measures shall be incorporated into project plans and then implemented to minimize potential impacts on GGS: • To minimize any direct impacts to the species, construction activities within 200 feet of Comanche Creek shall be conducted, to the extent feasible, during the active season for GGS (between May 1 and October 1). • Dewatered (removal of surface water or ground water from a riverbed or construction site by pumping or evaporation) portions of Comanche Creek after April 15 (if applicable) must remain dry for at least 15 consecutive days prior to excavation or filling of the dewatered habitat. • Construction personnel in connection with the subject individual development proposal shall participate in a United States Fish and Wildlife Service (USFWS) approved worker environmental awareness training program prior to the initiation of ground disturbance within 200 feet of Comanche Creek. During the training, workers shall be informed of the potential for this species to be present and the associated habitat for GGS and that it is unlawful to take harm or harass GGS. • 24 hours prior to construction activities within 200 feet of Comanche Creek, the subject area shall be surveyed for GGS by a qualified Biologist. Surveys of the subject area shall be repeated if a lapse in construction activity within the subject area of two weeks or more has occurred. If a snake is encountered during construction within the subject area, activities within 200 feet of this area shall cease until a qualified Biologist has determined that appropriate corrective measures have been completed such that the snake will not be harmed. The relevant project applicant shall report any known reported sightings and any known reported incidental take to the USFWS immediately by telephone at (916) 414-6600. • The clearing of wetland vegetation (if any) shall be confined to the minimal area reasonably necessary to excavate the toe of bank for the proposed outfall and riprap placement. Excavation equipment shall be located and operated from the top of the bank. • With respect to construction activities occurring within 200 feet of Comanche Creek, movement of heavy equipment to and from the subject	

Impacts	Mitigation Measures	Level of Significance After Mitigation
	area shall be restricted to existing unimproved roadways to minimize habitat disturbance to the extent feasible and no staging or storing of equipment shall occur within 200 feet of Comanche Creek.	
	MM BIO-5: Pre-construction Surveys for Western Pond Turtle, includes avoidance and passive relocation if found (Southern Study Area) The western pond turtle (WPT) is unlikely to migrate to the BYSP Area from Comanche Creek, so the following avoidance and minimization measures for this species only apply to activities within the Southern Study Area. Prior to County approval of improvement plans or grading permits for the construction of the new outfall to Comanche Creek, the developer shall hire a qualified Biologist to conduct a focused survey for WPT 30 days prior to the onset of construction activities within the Southern Study Area to determine presence or absence of this species within 100 feet of the subject construction area, regardless of the time of year. If construction for the outfall occurs between April 1 and September 30, this survey shall include turtle nests. If WPT is found within the subject construction area, the qualified Biologist shall move the turtle to a location outside of the subject construction area to suitable habitat as determined by a qualified Biologist under consultation with the California Department of Fish and Wildlife (CDFW). If a nest is found within the subject construction area or within a 100-foot radius of the subject construction area, construction shall not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location determined by the qualified Biologist under consultation with CDFW. Construction within 100 feet of Comanche Creek shall be avoided to the extent feasible when WPT adults and juveniles are overwintering (October 1 to February 29), because of the likelihood that turtle adults and juveniles could be present in upland habitats. If it is not feasible to avoid such construction activities during this time frame, an additional survey for overwintering locations shall be conducted no more than 14 days prior to construction within 100 feet of Comanche Creek in connection with the subject individual development proposal. If this species is found to be overwintering within the subject construction area, den locations shall be avoided until the area is	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	unoccupied, as determined by a qualified Biologist under consultation with CDFW. **MM BIO-6: Protection of Active Bird Nests, including pre-construction survey and implementation of avoidance buffer, if found (BYSP and Southern Study Area)** Prior to City or County approval of improvement plans or grading permits that may result in the removal of trees, the following measures shall be taken to minimize the effects of tree removal on active bird nests: • If a proposed development phase requires ground disturbance or vegetation removal to commence during the nesting season (February 1 to August 31), the subject developer shall hire a qualified Biologist to conduct pre-construction surveys within 7 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present. • If an active nest of a protected bird is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently, as confirmed by a qualified Biologist. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s). • In consultation with the United States Fish and Wildlife Service (USFWS) or CDFW (as appropriate), the qualified Biologist shall monitor any active nest(s) during the subject construction activities and shall modify the protection zone accordingly if determined necessary to prevent project-related nest disturbance, until the young have fledged.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM BIO-7: Roosting Bat Pre-construction Survey and Avoidance (BYSP and Southern Study Area) Prior to City or County approval of improvement plans or grading permits for any phase of the project, the developer shall hire a qualified Biologist with relevant roosting bat experience to conduct a survey for the proposed impact area and a 250 foot buffer for special-status bats during the appropriate time of day to maximize detectability to determine whether bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction in connection with each individual development proposal. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.) as determined appropriate by the qualified Biologist. If the Biologist determines or presumes bats are present (if there are site access issues or structural safety concerns) as a result of any of the foregoing survey(s), the relevant Applicant shall ensure the following activities related to the subject proposal occur: the Biologist shall exclude the bats from suitable spaces by installing one-way exclusion devices. After the bats vacate the space, the Biologist shall close off the space to prevent recolonization. Bat house(s) shall be installed adjacent to any excluded roost(s) or as close as feasible, to be determined by a qualified wildlife Biologist, to ensure excluded bats are provided adjacent roosting habitat. The relevant building demolition, ground disturbance, or other construction activities shall only commence after the Biologist verifies seven to 10 days later that the exclusion methods have successfully prevented bats from returning and that bats have vacated the bat house(s). To avoid impacts on non-volant (i.e., nonflying) bats, the Biologist shall only conduct bat exclusion and eviction from September 1 through March 31 (after maternity/pupping season). Exclusion efforts shall be restricted during periods of sensitive activity.	Less than significant impact.
Impact BIO-2: The proposed project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or	**MM BIO-8: Conduct Delineation of Potentially Jurisdictional Aquatic Resources (Creek and Detention Basin)**	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.	The relevant applicant in connection with the subject individual development proposal involving the installation of the outfall structure, shall complete a formal jurisdictional delineation to document and quantify the full extent of potentially jurisdictional waters within the relevant portions of the project site (if any) in coordination with the applicable resource agencies (United States Army Corps of Engineers [USACE] and/or Regional Water Quality Control Board [RWQCB]). If no resource agency jurisdiction is identified, then the relevant applicant constructing the outfall structure shall prepare a restoration and revegetation plan to offset the proposal's permanent impact to 0.04 acres and temporary impact to 0.04 acres of Valley Oak Riparian Woodland resulting from construction of the outfall structure, such that the stream corridor habitat is restored and revegetated at no less than a 1:1 ratio. The relevant applicant in connection with the subject individual development proposal involving the removal of the existing detention basin shall also coordinate, to the extent required under applicable laws and regulations, with the applicable resource agencies (USACE and/or RWQCB) to determine whether the detention basin within the project site is protected under Sections 404 and 401 of the Clean Water Act (CWA). **Obtain CWA Sections 401 and 404 Permits Prior to Construction (After Agency Coordination)** • The relevant applicant in connection with the subject individual development proposal involving the removal of the existing detention basin or the installation of the outfall shall comply with applicable laws and regulations including, if required, obtaining a Section 404 CWA permit for impacts to waters of the United States and a Section 401 Water Quality Certification from the RWQCB. Any such required permit and certification shall be obtained prior to issuance of grading permits in connection with the removal of the existing detention basin and/or the installation of the outfall structure, as relevant. • If required pursuant to an approved Section 404 permit and 401 water quality certification under applicable laws and regulations, the relevant applicant in connection with the subject individual development proposal shall design said proposal to result in no net loss of functions and values of waters of the United States and State by incorporating impact	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	avoidance, impact minimization, and/or compensatory mitigation for the impact, as set forth in the subject Section 404 permit and 401 water quality certification. • If required pursuant to an approved Section 404 permit and 401 water quality certification under applicable laws and regulations, compensatory mitigation shall be satisfied, which may consist of (1) obtaining credits from a mitigation bank; (2) making a payment to an in lieu fee program that would conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation (i.e., #3) may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). To the extent required pursuant to the approved Section 404 permit and 401 water quality certification under applicable laws and regulations, the relevant project/permit applicant shall retain responsibility for the implementation and success of the mitigation approach in connection with the subject individual development proposal. **Obtain Approval of and File Notification of Streambed Alteration Agreement Prior to Construction (After Agency Coordination)** In connection with an individual development proposal that involves the construction of the proposed outfall into Comanche Creek, the relevant applicant shall obtain and file a notification of a Streambed Alteration Agreement prior to conducting construction activities associated with the proposed outfall within Comanche Creek). If a Streambed Alteration Agreement is required under applicable laws and regulations, the relevant applicant shall implement all mitigation measures imposed by the CDFW related to the subject Streambed Alteration Agreement, which may include but not be limited to the implementation of erosion and bank stabilization measures, riparian habitat enhancement, and/or restoration and revegetation of the stream corridor habitat at no less than a 1:1 ratio, as determined by the CDFW.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-3: The proposed project could have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Implement MM BIO-8.	Less than significant impact.
Impact BIO-4: The proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of wildlife nursery sites.	Implement MM BIO-6, MM BIO-7, and MM BIO-8.	Less than significant impact.
Impact BIO-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None required.	Less than significant impact.
Impact BIO-6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.	None required.	No impact.
Cumulative Impact	Implement MM BIO-1 through MM BIO-8.	Less than significant impact.
Section 3.5—Cultural Resources and Tribal Cultural Resources		
Impact CUL-1: The proposed project could cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	**MM CUL-1a**: Prior to issuance of the first grading permit or site improvement plan (whichever comes first), the subject developer of the relevant specific individual development proposal shall hire an Archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology and a qualified Architectural Historian or historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards to prepare a Historical and Archaeological Resources Treatment Plan for the proposed project. The plan shall be subject to review and approval by City planning staff prior to approval of the subject grading permit or site improvements plan. Specifically, the plan shall include any and all feasible, protective measures required to ensure that character-defining elements of the Engineering	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Building and/or the Match Block Storage Building (as applicable) are not inadvertently damaged or demolished during project construction. The plan shall also include provisions for a Worker Environmental Awareness Program (WEAP) archaeological resource sensitivity training for construction personnel conducting ground disturbance at the site or off-site improvements prior the start of construction and provisions for the identification, recordation, and disposition of any significant archaeological resources (both historic era and prehistoric) that may be encountered over the course of subsurface excavations at the project site. **MM CUL-1b:** At such time that adaptive reuse of the Engineering Building and/or the Match Block Storage Building is pursued as part of an individual specific development proposal, adaptive reuse design shall be developed by a qualified Architectural Historian/Historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards for architectural history/historic preservation. The City shall include in its review the feasibility of adaptive reuse in consideration of the proposed new use, seismic retrofit needs, and overall structural stability of the buildings. These findings shall then inform the adaptive reuse design, as appropriate and feasible, which shall be developed by the Architectural Historian/Historic Preservation Professional in coordination with the subject developer and City to ensure that all of the important character-defining features of the buildings are appropriately considered in the proposed design. The proposed design shall contain sufficient detail so the qualified Architectural Historian/Historic Preservation professional can determine whether the adaptive reuse is consistent with the Standards for Rehabilitation. The adaptive reuse of each of the Engineering Building and/or Match Block Storage Building shall include a reasonably detailed protection and maintenance plan that outlines a long-term strategy for maintaining and protecting these resources over time. The plan shall include a schedule for regular maintenance of the subject building(s) and vicinity, including clearing of any overgrown vegetation, regular monitoring and surveillance, and shall also develop and incorporate a reasonable	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	strategy for the long-term security of the building(s) and vicinity to prevent trespassing and vandalism of the buildings to the extent feasible. If, after consultation with the above-referenced historic preservation professionals, it is determined that the subject building(s) cannot be adaptively reused in conformance with the Standards for Rehabilitation as currently designed and the subject developer therefore determines that adaptive reuse cannot feasibly proceed and instead determines to proceed with demolition of the subject building(s), the subject building(s) shall be subject to archival documentation that consists of photography of all exterior elevations, and views to and from the building(s), with detailed photographs of materials, doors, windows, rooflines, and other key components, and the preparation of an associated historical narrative documenting the subject building(s)' historical significance. Also, any original plans (if available) of the subject building(s) shall be scanned and reproduced so that they are available for future study. The foregoing documentation shall be based on the National Park Service's Historic American Building Survey (HABS) guidelines for narrative and photographic documentation. A final set of the archival documentation and photographs shall be recorded and filed. In addition, should demolition occur, interpretive displays and salvage of historic materials shall be incorporated into the proposed project, as appropriate and feasible.	
Impact CUL-2: The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Implement MM CUL-1a and MM CUL-1b.	Less than significant impact.
Impact CUL-3: The proposed project could disturb human remains, including those interred outside of formal cemeteries.	Implement MM CUL-1a and CUL-1b, and: **MM CUL-3:** Should a discovery of previously unknown buried human remains occur during ground-disturbing construction activities, Section 7070.5 of the California Health and Safety Code applies, and the procedures shall be followed by the subject developer in connection with the relevant specific individual development proposal. In the event of the accidental discovery or recognition of any Native American human remains (upon notification from a County Coroner pursuant to Health and Safety Code § 7050.5(c)), Public Resources Code Section 5097.98 shall be followed.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Relevant provisions of both Section 7050.5 of the Health and Safety Code (related to discovery of any human remains) as well as Section 5097.98 of the Public Resources Code (related to discovery of Native American remains) shall apply, as relevant. Once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken: 1. There shall be no further excavation or disturbance within 100 feet of the human remains until the County Coroner is contacted and has made the required determinations pursuant to Health and Safety Code Section 7050.5(a) including whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American (or has reason to believe that they are those of a Native American), the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD (or his or her authorized representative) may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resource Code Section 5097.98, or 2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendant or the most likely descendant failed to make a recommendation within 48 hours after being notified by the NAHC; • The MLD identified fails to make a recommendation; or • The landowner or its authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact CUL-4: The proposed project could cause a substantial adverse change in the significance of a Tribal Cultural Resource (TCR), defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).	Implement of MM CUL-1a, MM CUL-1b, and MM CUL-3.	Less than significant impact.
Impact CUL-5: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Implement of MM CUL-1a, MM CUL-1b, and MM CUL-3.	Less than significant impact.
Cumulative Impact	Implementation of MM CUL-1a, MM CUL-1b, and MM CUL-3.	Less than significant impact.
Section 3.6—Energy		
Impact ENER-1: The proposed project may result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	**MM ENER-1:** New residential uses and new commercial uses without commercial kitchen components, which are located within new buildings, shall be all-electric (i.e., natural gas utility shall not be permitted). However, natural gas usage and/or the extension of existing natural gas infrastructure shall be permitted for the following: (1) new commercial uses with commercial kitchen components that are located within new buildings; and (2) the adaptive reuse of existing building(s) so long as the subject Developer can reasonably document to the City's Planning Director that conversion to all-electric of the subject existing building is not physically and/or economically feasible.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact ENER-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.7—Geology and Soils		
Impact GEO-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking. iii) Seismic-related ground failure, including liquefaction. iv) Landslides.	None required.	Less than significant impact.
Impact GEO-2: The proposed project would not result in substantial soil erosion or the loss of topsoil.	None required.	Less than significant impact.
Impact GEO-3: The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	None required.	Less than significant impact.
Impact GEO-4: The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.	None required.	Less than significant impact.
Impact GEO-5: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**MM GEO-1: Inadvertent Discovery of Paleontological Resources During Project Construction**	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Prior to ground disturbance activities, construction contractors and personnel shall be required to undergo Worker Environmental Awareness Program (WEAP) training to recognize and identify paleontological resources on-site. The training shall include visual aids, a discussion of applicable laws and statutes relating to paleontological resources, types of resources that may be found within the project site, and procedures to be followed in the event such resources are encountered. The training shall be conducted by a Paleontologist who meets the Society of Vertebrate Paleontology Professional Qualification Standards. Should any vertebrate remains (e.g., bones or teeth) or unusually abundant and well-preserved invertebrates or plants be unearthed, the construction contractors and personnel shall not attempt to remove them as they could be extremely fragile and therefore prone to crumbling. The relevant developer, in connection with the subject individual specific development proposal, shall include a standard inadvertent discovery clause in every project-related construction contract to inform their respective contractors of this requirement. To ensure the occurrence is properly recorded, all work in the immediate vicinity of the discovery shall be diverted at least 15 feet until a professional paleontologist assesses the find and, if deemed appropriate, salvages it in a timely manner. All recovered fossils shall be deposited in an appropriate repository, such as the University of California Museum of Paleontology (UCMP), where they will be properly curated and made accessible for future study.	
Cumulative Impact	None required.	Less than significant impact
Section 3.8—Greenhouse Gas Emissions		
Impact GHG-1: The proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Implement MM ENER-1.	Less than significant impact.
Impact GHG-2: The proposed project could conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases with the exception of those related to the use of natural gas.	Implement MM ENER-1.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Cumulative Impact	None required.	Less than significant impact.
Section 3.9—Hazards and Hazardous Materials		
Impact HAZ-1: The proposed project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	**MM HAZ-1:** Prior to issuance of the first grading permit for the proposed project, the developer shall retain a qualified hazardous materials consultant to prepare a Soil and Debris Management Plan (SDMP) which will identify specific construction measures to be implemented at the project site. The SDMP shall include site control measures, excavation and backfill procedures, confirmation of sampling procedures and screening levels, dust control measures, stormwater protection measures, waste soil handling and disposal procedures, and a debris management plan in accordance with applicable local, State, and federal regulations. The SDMP shall identify contingency procedures to be followed in the event that subsurface structures (e.g., vaults or tanks) are encountered during excavation or other unanticipated discoveries are made. The SDMP shall also specify any special procedures for addressing issues in proximity to the asphalt cap and groundwater monitoring well network which are to remain in place according to the Land Use Covenant (LUC) for the project site. The developer shall submit the SDMP and all of its components to the California Department of Toxic Substances Control (DTSC) for review and approval and shall provide copies of the DTSC-approved SDMP to the City to comply with this mitigation measure, prior to initiating project site improvements.	Less than significant impact.
Impact HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.	Implement MM HAZ-1.	Less than significant impact.
Impact HAZ-3: The proposed project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Implement MM HAZ-1.	Less than significant impact.
Impact HAZ-4: The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code	Implement MM HAZ-1.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.		
Impact HAZ-5: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	Less than significant impact.
Impact HAZ-6: The proposed project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.10—Hydrology and Water Quality		
Impact HYD-1: The proposed project could violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Implement MM HAZ-1.	Less than significant impact.
Impact HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	None required.	Less than significant impact.
Impact HYD-3: The proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	Implement MM BIO-8.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) Impede or redirect flood flows?		
Impact HYD-4: The proposed project would not be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.	None required.	Less than significant impact.
Impact HYD-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.11—Land Use and Planning		
Impact LAND-1: The proposed project would not physically divide an established community.	None required.	Less than significant impact.
Impact LAND-2: The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.12—Noise		
Impact NOI-1: The proposed project could cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**MM NOI-1: Noise Land Use Compatibility Mitigation Plan** As part of the City's design review process for proposed noise-sensitive land use development projects (such as, but not limited to, multi-family residential land uses) that would be located within 325 feet of the active railroad mainline, and prior to issuance of building permits, the developer of the subject specific individual development proposal shall demonstrate one of the following:	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	(1) Outdoor active use areas are shielded from railroad noise source by structures or a masonry wall (such shielding must blocking the line of sight between the noise source and receptor, with no gaps); or (2) An acoustic study (prepared consistent with the requirements set forth in the Noise Element of the Chico 2030 General Plan) shows that the proposed development would remain below the City's applicable noise land use compatibility standards for the proposed land use. The subject developer shall submit the acoustic study to the Community Development Director for review and approval. Upon approval by the City, the proposed acoustical design features shall be incorporated into the subject development proposal's construction documents. Noise reduction design features may include, but are not limited to, locating outdoor active use areas of noise-sensitive land uses to be shielded by structures (buildings, enclosures, or sound walls).	
Impact NOI-2: The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM NOI–2a: Construction Noise Mitigation Plan** Each specific individual development proposal shall adhere to the permitted construction hours as delineated in the City's Municipal Code, if feasible. In addition, prior to the issuance of demolition, grading, site improvement plans, and/or construction permits in connection with an application for a specific individual development proposal, the subject developer(s) of each such individual proposal that may include the operation of multiple pieces of heavy construction equipment within 50 feet of the property line of noise-sensitive receptors (e.g., residences, hospitals, schools) shall either (1) demonstrate and expressly state on project drawings that multiple pieces of equipment will not be necessary or allowed to operate within 50 feet of the property line of noise-sensitive receptors, or (2) the subject developer shall hire an acoustics consultant to conduct a site-specific acoustical analysis to confirm whether there would be any site-specific exceedance of applicable standards. The analysis shall assess consistency of the proposed construction activities with the exemption criteria for construction activities set forth under Chico Municipal Code Section 9.38.060, once the final construction equipment list that will be used for the subject demolition, grading activities and/or construction activities is determined. The site-specific acoustical analysis shall be prepared by the developer and subject to approval by the City. If the analysis determines that the subject	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	construction activities would not meet the exemption criteria, then specific measures to attenuate the identified temporary noise impact to minimize exceedances of the relevant noise permit exemption criteria is achieved shall be outlined in the analysis and reviewed and approved by the City and implemented in the subject proposal. Specific measures may include, but are not limited to, the following Best Management Practices (BMPs): • Install temporary sound barriers between sensitive receptor locations and the construction area where the heavy equipment will be operating. • Stationary equipment (such as generators and air compressors) and equipment maintenance and staging areas shall be located as far from existing noise-sensitive land uses, as feasible. • Post a construction site notice near the construction site access point or in an area that is clearly visible to the public. The notice shall include the following: job site address; permit number, name, and phone number of the contractor and owner; dates and duration of construction activities; construction hours allowed; and the phone numbers of the City's Planning Department and the construction contractor where noise complaints can be reported and logged. • If construction equipment is equipped with back–up alarm shut offs, switch off back–up alarms and replace with human spotters, as feasible. • Restrict haul routes and construction–related traffic to the least noise-sensitive roadways. • Reduce non–essential idling of construction equipment to no more than 5 minutes. • Ensure that all construction equipment is monitored and properly maintained in accordance with the manufacturer's recommendations to minimize noise. • Fit all construction equipment with properly–operating mufflers, air intake silencers, and engine shrouds, no less effective than as originally equipped by the manufacturer, to minimize noise emissions. • To the extent feasible, use acoustic enclosures, shields, or shrouds for stationary equipment such as compressors and pumps. • Shut off generators when generators are not needed. • Coordinate deliveries to reduce the potential of trucks waiting to unload and idling for long periods of time.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Grade surface irregularities on construction sites to prevent potholes from causing vehicular noise. • Minimize the use of impact devices such as jackhammers, pavement breakers, and hoe rams. Where feasible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal. The final noise reduction measures to be implemented and their associated details, as set forth in the subject Construction Noise Mitigation Plan shall be included on all subject construction and building documents and/or construction management plans and submitted for verification to the City; implemented by the construction contractor through the duration of the subject construction phase; and discussed at the subject pre–demolition, –grade, and/or –construction meetings. **MM NOI–2b: Stationary Source Noise Reduction Plan** As part of the City's design review process for individual commercial and multi-family residential projects, and prior to issuance of building permits, the developer of the subject specific individual development proposal shall demonstrate one of the following: (1) Major noise-generating elements (e.g., truck loading docks within 150 feet of a sensitive receptor, or surface parking areas within 60 feet of a sensitive receptor, or commercial grade mechanical ventilation equipment within 15 feet of a sensitive receptor, etc.), are shielded from nearby residential uses by structures or a masonry wall (such shielding must blocking the line of sight between the noise source and receptor, with no gaps), or (2) An acoustic study (prepared consistent with the requirements set forth in the Noise Element of the Chico 2030 General Plan) shows that the operational noise associated with any major noise-generating elements (e.g., truck loading docks, large parking areas, commercial grade mechanical systems, etc.), would remain below the City's nighttime noise standards of 65 dBA L_{max} and 50 dBA L_{eq}. Examples of major noise generating elements include, but are not necessarily limited to, unshielded truck loading docks within 150 feet of a sensitive receptor,	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	or surface parking areas within 60 feet of a sensitive receptor, or commercial grade mechanical ventilation equipment within 15 feet of a sensitive receptor. The subject developer shall submit the acoustic study to the Planning Director for review and approval. Upon approval by the City, the proposed acoustical design features shall be incorporated into the subject development proposal's construction documents. Noise reduction design features may include, but are not limited to, locating stationary noise sources on the subject construction area to be shielded by structures (buildings, enclosures, or sound walls) or by using equipment that has a quieter rating.	
Impact NOI-3: The proposed project could result in generation of excessive groundborne vibration or groundborne noise levels.	**MM NOI–3: Construction Vibration Reduction Plan** Prior to issuance of grading and/or building permits for any future development projects that would necessitate the use of large vibratory rollers within 25–feet of a structure, or the use of any other heavy construction equipment within 15–feet of a structure, a note shall be provided on grading and building plans indicating that during grading and construction the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction–related vibration impacts: • No impact pile driving shall be permitted. • Submit a Construction Vibration Reduction Plan that identifies specific techniques, such as the depth and location of temporary trenching, that would minimize potential vibration impacts to the impacted structure. • The individual project owner/developer shall submit the Construction Vibration Reduction Plan to the Planning Director for review and approval prior to issuance of building permits. Upon approval by the City, the construction vibration reduction measures shall be incorporated into the construction documents.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.13—Population and Housing		
Impact POP-1: The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes	None required.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
and businesses) or indirectly (for example, through extension of roads or other infrastructure).		
Cumulative Impact	None required.	Less than significant impact.
Section 3.14—Public Services		
Impact PUB-1: The proposed project would not result in substantial adverse physical impacts associated with the provisions of new or expanded fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.	None required.	Less than significant impact.
Impact PUB-2: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.	None required.	Less than significant impact.
Impact PUB-3: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.	None required.	Less than significant impact.
Impact PUB-4: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.	None required.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact PUB-5: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities (i.e., library facilities).	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.15—Recreation		
Impact REC-1: The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	None required.	Less than significant impact.
Impact REC-2: The proposed project would involve the construction and operation of park and recreational facilities, which could result in an adverse physical effect on the environment but would not require the construction or expansion of recreational facilities beyond those contemplated by the proposed project.	See Mitigation Monitoring and Reporting Program.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.16—Transportation and Traffic		
Impact TRANS-1: The proposed project would not result in average VMT in excess of any of the applicable thresholds. It would generate home-based VMT per resident at a rate less than 85 percent of the regional baseline for residential uses. For the health/fitness club use and Engineering Building event center use, the proposed project would generate home-based work VMT per employee at a rate less than 85 percent of the regional baseline. The inclusion of local retail uses	None required.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
contributes to the lower VMT generation rates for the proposed project's households.		
Impact TRANS-2: The proposed project could generate substantial demand for bicycle facilities on streets near the project site without associated bicycle infrastructure improvements, causing a physical change inconsistent with General Plan policies (CIRC-2.1, CIRC-2.2, CIRC-3.1, CIRC-3.3) and bicycle policies contained in City of Chico Bike Plan 2019 Update.	**MM TRANS-2:** Prior to City acceptance of subdivision improvements for the nearest street connection into the proposed project site (as specified), in connection with the relevant specific individual development proposal, the subject developer or City shall be responsible for ensuring the construction of the following bicycle facilities outlined in the Chico Bicycle Plan 2019 Update (and as shown in Figure 3.17-6). To the extent that adequate funds exist for the City to design and construct off-site infrastructure improvements pursuant to a development agreement for the Barber Yard Specific Plan project it shall be the City's responsibility to design and construct the bicycle facilities listed below concurrently with the associated phase: Class III Bike Boulevards: • On Ivy Street from W. 10th Street into the BYSP Area (Ivy Street) • On Chestnut Street between W. 13th Street and W. 16th Street (W. 16th Street) • On W. 16th Street from Salem Street to the BYSP Area (W. 16th Street) • On W. 20th Street from Salem Street into the BYSP Area (W. 20th Street) Final maps shall not be approved for the subject phase until the relevant improvements are completed or bonded by inclusion in a City-approved subdivision improvement agreement.	Less than significant impact.
Impact TRANS-3: The proposed project could generate substantial demand for pedestrian facilities on streets near the project site, which currently lack pedestrian facilities and which connect the project site to existing commercial uses in the vicinity, without including associated pedestrian infrastructure improvements, inconsistent with General Plan policies (CIRC-2.1, CIRC-2.2 and CIRC-4.2) contained in City of Chico planning documents.	**MM TRANS-3**: Prior to City acceptance of subdivision improvements for the specified street connection into the project site in connection with the relevant specific individual development proposal, the subject developer or City shall be responsible for ensuring the construction of sidewalks where gaps are present on West 16th Street between the project site and Broadway Street and on West 20th Street between the project site and Broadway Street, in conjunction with the construction of subdivision improvements that extend each of those respective streets into the project site. To the extent that adequate funds exist for the City to design and construct off-site infrastructure improvements pursuant to a development agreement for the Barber Yard Specific Plan project it shall be the City's	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
	responsibility to design and construct the bicycle facilities listed below concurrently with the associated phase. Final maps shall not be approved for the phase which extends the specified street connection into the project site until the associated sidewalk gap improvements are completed or bonded by inclusion in a City-approved subdivision improvement agreement.	
Impact TRANS-4: The proposed project would generate demand for transit facilities but remain consistent with transit policies contained in the City of Chico General Plan, and thus would not conflict with any program, plan, ordinance or policy addressing public transit facilities.	None required.	Less than significant impact.
Impact TRANS-5: The proposed project would modify the baseline transportation system in a manner that would not substantially increase hazards due to a geometric design feature or incompatible uses.	None required.	Less than significant impact.
Impact TRANS-6: The proposed project would provide adequate emergency access, consistent with emergency policies in the City of Chico General Plan.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.17—Utilities and Service Systems		
Impact UTIL-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	None required.	Less than significant impact.
Impact UTIL-2: There would be sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry and multiple dry years.	None required.	Less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact UTIL-3: The proposed project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None required.	Less than significant impact.
Impact UTIL-4: The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	None required.	Less than significant impact.
Impact UTIL-5: The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.	None required.	Less than significant impact.
Cumulative Impact	None required.	Less than significant impact.
Section 3.18—Wildfire		
Impact WILD-1: The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	None required.	No Impact.
Impact WILD-2: The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	None required.	No Impact.
Impact WILD-3: The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	None required.	No Impact.
Cumulative Impact	None required.	Less than significant impact.

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CHAPTER 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) has been prepared for the Barber Yard Specific Plan Project (State Clearinghouse No. 2023036041) (proposed project) in accordance with the applicable criteria, standards, and procedures of the California Environmental Quality Act (CEQA), as amended (California Public Resources Code [PRC], § 21000, *et seq.*) and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, § 15000, *et seq.*) (collectively, CEQA). In accordance with Public Resources Code Section 21067 and Sections 15367, 15050, and 15051 of the CEQA Guidelines, the City of Chico (City) is the Lead Agency under whose authority this document has been prepared. This Draft EIR is intended to serve as an informational document for use by the City and public agency decision-makers, interested organizations, and members of the public in evaluating the potential environmental impacts of the proposed project.

1.1.1 - Overview

The proposed Barber Yard Specific Plan (BYSP or Specific Plan; proposed project) is a comprehensive planning and regulatory document that would establish specific guiding principles and strategies as well as applicable permitted and conditionally permitted uses, development standards, and design guidelines for development of an approximately 133-acre area (BYSP Area or Barber Yard) within the City, as well as an adjacent approximately 16-acre off-site improvement area (located within unincorporated Butte County) upon which a stormwater detention basin and associated storm drain alignment and outfall would be installed to serve the proposed project. Together, the BYSP Area and the off-site improvement area constitute the "project site" for purposes of this analysis. The proposed project consists of the full buildout of the BYSP, including off-site improvements, resulting in a mixed-use community accommodating a mix of housing, commercial, recreational and office uses located throughout. Chapter 2, Project Description provides a complete description of the proposed project.

1.1.2 - Purpose and Authority

This Draft EIR provides a project-level analysis of the potential environmental effects of the proposed project. The environmental impacts of the proposed project are analyzed in this Draft EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with the construction and operation of the proposed project. It also identifies appropriate and feasible mitigation measures and considers a reasonable range of potentially feasible alternatives that, if adopted, may significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction

- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts (if any)
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found not to be Significant
- Areas of Known Controversy

1.1.3 - Lead Agency Determination

The City of Chico (City) is designated as the Lead Agency for the proposed project. CEQA Guidelines Section 15367 defines the lead agency as ". . . the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making process for discretionary entitlements within their respective purview and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions (FCS), an environmental consultant retained by the City. Prior to public review, it was extensively reviewed and evaluated by the City. This Draft EIR reflects the independent judgment and analysis of the City as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Chapter 7, Persons and Organizations Consulted/List of Preparers, of this Draft EIR.

1.2 - Scope of the Draft EIR

This Draft EIR addresses the potential environmental effects of the proposed project. The City issued a Notice of Preparation (NOP) for the proposed project on March 25, 2023, which circulated between March 25, 2023, through May 9, 2023, for the statutorily required 30-day public review period, plus an additional 15 days to facilitate a second public scoping meeting. The scope of analysis contained in this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by other public agencies, interested organizations, and the public, as appropriate, in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Forty-nine comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR. In addition, one public comment letter was received from an individual after the NOP comment period ended. Consistent with Public Resources Code Section 21080.4 and State CEQA Guidelines Sections 15082(b) and 15103, comments received after the NOP period do not require a response. The comment letter has been included herein for informational purposes.

Table 1-1: NOP Comment Letters

Agency/Organization	Author	Date
Public Agencies		
Native American Heritage Commission	Cameron Vela, Cultural Resources Analyst	March 27, 2023
Chico Area Recreation District	Annabel Grimm	April 3, 2023
California Department of Fish and Wildlife	Tanya Sheya, Environmental Program Manager	April 19, 2023
Department of Toxic Substances Control	Garrett Thornton	April 25, 2023
Butte County Department of Development Services, Planning Division	Dan Breedon, AICP, Planning Manager	May 4, 2023
Butte County Air Quality Management District	Jason Mandly, Senior Air Quality Planner	May 9, 2023
Central Valley Regional Water Quality Control Board	May Bunte, PE, Senior Water Resources Control Engineer, Groundwater Unit	May 9, 2023
Organizations		
Earth Justice	Matt Vespa, Senior Attorney Rebecca Barker, Senior Associate Attorney	March 28, 2023
Individuals		
N/A	Amy Hasle	March 27, 2023
N/A	Bob Summerville	April 6, 2023
N/A	Jacqui Wilson	April 12, 2023
N/A	Annie Kavanagh	April 14, 2023
N/A	Robin Trenda	April 17, 2023
N/A	Colleen DeLaney, John Struthers, Betsy DeLaney	April 21, 2023
N/A	Orah Palmer	April 23, 2023
N/A	Chris Nelson	April 25, 2023
N/A	Dennis Partington	April 28, 2023
N/A	Shery Butler	April 29, 2023
N/A	Kim Hamberg	May 1, 2023
N/A	Linda Hamilton	No Date
N/A	Chris Nelson	May 2, 2023
N/A	Chris Nelson	May 2, 2023
N/A	Linda Hamilton	May 3, 2023
N/A	Linda Hamilton	May 4, 2023

Agency/Organization	Author	Date
N/A	Celeste Riner	May 4, 2023
N/A	Mark Stemen	May 5, 2023
N/A	Chris Nelson	May 6, 2023
N/A	Sharon Fritsch	May 7, 2023
N/A	Susan Baldwin	May 8, 2023
N/A	David Donnell	May 8, 2023
N/A	Hilary R Herman	May 8, 2023
N/A	Hilary R Herman	May 8, 2023
N/A	Jim Mathys and Kathleen Mathys	May 1, 2023
N/A	Vita Segalla	May 8, 2023
N/A	Tyler Wilson and Christine Wilson	May 8, 2023
N/A	Geoff Wintrup	May 8, 2023
N/A	Riki Berlin	May 9, 2023
N/A	Janet Ellner	May 9, 2023
N/A	Linda Hamilton	May 9, 2023
N/A	Linda Hamilton	May 9, 2023
N/A	Dana Hanson	May 9, 2023
N/A	Susan Kirk	May 9, 2023
N/A	John Merz	May 9, 2023
N/A	Linda Hathorn	May 9, 2023
N/A	William Mundy	May 9, 2023
N/A	William Mundy	May 9, 2023
N/A	Richard G Scholk	May 9, 2023
N/A	Elizabeth Stewart	May 9, 2023
N/A	Dan Whittle	May 9, 2023
Late Comment–Individual		
N/A	David Eaton	5-11-23
Source: Compiled by FirstCarbon Solutions (FCS). 2023.		

Pursuant to CEQA Guidelines Section 15082(c), the City sent notices of public scoping meetings on March 24 and April 12, 2023, as part of the NOP. The meetings were held in person on April 6 and April 27, 2023, to receive comments on the scope and content of the Draft EIR. At each meeting,

attendees were given an opportunity to provide comments and express concerns about the potential effects of the proposed project.

1.2.1 - Environmental Issues Determined not to be Significant

The NOP identified one topical area that was determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 4, Effects Found not to be Significant. This topical area is as follows:

- Mineral Resources

In addition, certain subjects within various topical areas were analyzed but determined not to be significant as further explained in Section 4, Effects Found not to be Significant. These subjects are follows:

- Scenic Resources within a State scenic highway
- Conflict with zoning or convert Forest Land or Timberland
- Other changes that could result in conversion of Farmland to nonagricultural use or conversion of Forest Land to non-forest use
- Soils incapable of supporting the use of septic or Alternative Wastewater Disposal Systems
- Airport hazards
- Noise from airport activity
- Displacement of existing housing, necessitating replacement housing
- Exposure of project occupants to pollutant concentrations from wildfire

An explanation of why each issue is determined not to be significant is provided in Section 4, Effects Found not to be Significant.

1.2.2 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These topical areas are as follows:

- Aesthetics, Light, and Glare
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality

- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire

1.3 - Organization of the Draft EIR

This Draft EIR is organized into the following main sections:

- **Chapter ES: Executive Summary.** This Chapter includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of any areas of known controversy and issues to be resolved and overview of the Mitigation Monitoring and Reporting Program (MMRP), in addition to a table that summarizes the identified impacts, mitigation measures, and levels of significance after mitigation, are also included in this section.
- **Chapter 1: Introduction.** This Chapter provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Chapter 2: Project Description.** This Chapter includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible and trustee agencies, and discretionary approvals needed for the proposed project are also provided.
- **Chapter 3: Environmental Impact Analysis.** This Chapter analyzes the environmental impacts of the proposed project. Impacts are organized into major topical areas. Each topical area includes a description of the environmental setting, methodology used in the analysis, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Chapter 3 are as follows:
  - **Section 3.1—Aesthetics:** Addresses the potential visual impacts of development intensification and the overall increase in illumination (light and glare) produced by the proposed project.
  - **Section 3.2—Agriculture and Forestry Resources:** Addresses the potential for conversion of Important Farmland to nonagricultural use.
  - **Section 3.3—Air Quality:** Addresses potential air quality impacts associated with project implementation and emissions of criteria pollutants. In addition, the section also evaluates project emissions of toxic air contaminants and includes a health risk assessment.
  - **Section 3.4—Biological Resources:** Addresses potential impacts on special-status habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat for special-status species; and potential impacts on listed, proposed, and candidate threatened and endangered species.

- **Section 3.5—Cultural Resources and Tribal Cultural Resources:** Addresses potential impacts on historical resources, archaeological resources, paleontological resources, and burial sites. Tribal Cultural Resources include sites, features, places, or objects that are of cultural value to one or more California Native American Tribe.
- **Section 3.6—Energy:** Addresses potential project impacts related to energy usage.
- **Section 3.7—Geology, Soils and Seismicity:** Addresses the potential impacts the project may have on soils and assesses the effects of project development in relation to geologic and seismic conditions.
- **Section 3.8—Greenhouse Gas Emissions:** Addresses potential project emissions of greenhouse gases.
- **Section 3.9—Hazards and Hazardous Materials:** Addresses potential for presence of hazardous materials or conditions on the project site and in the vicinity of the project site that may have the potential to create a significant hazard to the public or environment.
- **Section 3.10—Hydrology and Water Quality:** Addresses the potential impacts of the proposed project on local hydrological conditions, including drainage areas, and changes in the flow rates, as well as the proposed project's potential impacts to water quality, erosion, and groundwater supplies.
- **Section 3.11—Land Use and Planning:** Addresses the potential land use impacts associated with division of an established community and consistency with relevant land use plans, policies, and regulations adopted for the purpose of avoiding or mitigation an environmental impact.
- **Section 3.12—Noise:** Addresses potential noise impacts during construction and at project buildout from mobile and stationary sources on sensitive receptors. Also addresses potential impacts related to groundborne vibration and groundborne noise.
- **Section 3.13—Population and Housing:** Addresses the potential of the proposed project to induce substantial unplanned direct or indirect population growth, as well as the potential displace substantial numbers of people or housing.
- **Section 3.14—Public Services:** Addresses potential impacts of the proposed project upon public services, including fire protection, law enforcement, and schools in terms of the need to provide new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives.
- **Section 3.15—Recreation:** Addresses potential impacts of the proposed project related to parks and recreational facilities in terms of the need to provide new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives.
- **Section 3.16—Transportation and Traffic:** Addresses potential impacts related to the local and regional roadway system with respect to Vehicle Miles Traveled (VMT) and public transportation, bicycle, and pedestrian access.
- **Section 3.17—Utilities and Services Systems:** Addresses potential impacts related to service providers, including water supply, wastewater, storm drainage, solid waste, and energy (electric and natural gas) providers, and telecommunications. Addresses potential impacts related to service providers, including water supply, wastewater, storm drainage, solid

waste, energy (electric and natural gas) providers, and telecommunications, with respect to the proposed project's potential to require or result in the construction of new or expanded infrastructure.

- **Section 3-18—Wildfire:** Addresses potential impacts related to wildfire, including lands within State Responsibility Areas and lands classified as very high fire hazard severity zones.

- **Chapter 4: Effects Found not to be Significant.** This Chapter contains analyses of the topical sections not addressed in Chapter 3.
- **Chapter 5: Other CEQA Considerations.** This Chapter provides a summary of significant environmental impacts, including any growth-inducing and significant, irreversible impacts.
- **Chapter 6: Alternatives to the Proposed Project.** This Chapter compares the impacts of the proposed project with three land use project alternatives: the No Project Alternative, the On-site Stormwater Basin Alternative, and the General Plan Land Use Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Chapter 7: Persons and Organizations Consulted/List of Preparers.** This Chapter contains a list of persons and organizations consulted during the preparation of this Draft EIR. This Chapter also contains a list of the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Appendices.** The Draft EIR appendices includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced, among other things, several technical studies, analyses, and previously certified environmental documentation. Information from relevant documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s) where possible or briefly described if the data or information cannot be summarized. The relationship between the incorporated part of the referenced document and the Draft EIR has also been described. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of this Draft EIR. The documents and other sources that have been used in the preparation of this Draft EIR include, but are not limited to:

- Chico 2030 General Plan, adopted 2011 and last amended March 2017
- Draft and Final Chico 2030 General Plan EIR (SCH No. 2008122038)
- Chico Municipal Code
- Climate Action Plan Update, 2021

In accordance with CEQA Guidelines Section 15150(b), the above-referenced documents used in the preparation of the Draft EIR are available to the public for inspection at the City of Chico Community Development Department at the address shown in Section 1.6 below.

1.5 - Documents Prepared for the Proposed Project

The following technical studies and analyses were prepared for the proposed project as part of this environmental process:

- Land Evaluation and Site Assessment Model (Appendix B)
- Air Quality, Greenhouse Gas Emissions, and Energy Analysis Report (Appendix C)
- Biological Resources Assessment (Appendix D)
- Tree Survey Report (Appendix D)
- Phase I Cultural Resources Assessment (Appendix E)
- Historic Built Environment Survey Report (Appendix E)
- Phase I Environmental Site Assessment (Appendix F)
- Phase II Environmental Site Assessment (Appendix F)
- Noise Impact Analysis (Appendix H)
- Level of Service Operational Analysis (Appendix J)[1]
- Vehicle Miles Traveled Analysis (Appendix J)
- Water Supply Assessment (Appendix K)
- Sewer Generation Memorandum (Appendix K)

1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the City of Chico filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (PRC § 21161, CEQA Guidelines §§ 15085(a), 15372). Concurrent with the NOC, the City also provided the related Notice of Availability (NOA) (CEQA Guidelines § 15087(a)), and this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the 45-day public review period, the Draft EIR, including the technical appendices, is available for review during normal business hours at the City of Chico Community Development Department. The address is provided below:

City of Chico
Community Development Department
411 Main Street, 2nd Floor
Chico, CA 95927

The Draft EIR is also available for review online at the following website: https://chico.ca.us/Departments/Community-Development/Planning-Division/Current-Projects/index.html.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

[1] This technical study is included for informational purposes and is not considered part of the environmental analysis required by CEQA.

City of Chico
Community Development Department
Attn: Mr. Mike Sawley, Principal Planner
411 Main Street, 2nd Floor
PO Box 3420
Chico, CA 95927
Phone: 530.879.6812
Email: mike.sawley@chicoca.gov

Submittal of electronic comments via email in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the 45-day public review period, written responses to all significant environmental issues raised during the comment period will be prepared and made available for review by the commenting agencies, organizations and the public at least 10 days prior to the public hearing before the Planning Commission on the proposed project, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the proposed project.

CHAPTER 2: PROJECT DESCRIPTION

This Draft Environmental Impact Report (Draft EIR) analyzes the potential environmental effects of the proposed Barber Yard Specific Plan (BYSP or Specific Plan; proposed project). The BYSP is a comprehensive planning and regulatory document that would establish specific guiding principles and strategies as well as applicable permitted and conditionally permitted uses, development standards and design guidelines for development of an approximately 133-acre area (BYSP Area or Barber Yard) within the City of Chico (City); as well as an approximately 16-acre off-site improvement area upon which various storm drain and other utility and street network improvements to serve the project would be located, as further described below. Collectively, the foregoing approximately 16 acres off-site are referred to herein as the "off-site improvement area." Together, the BYSP Area and the off-site improvement area constitute the "project site" for purposes of this analysis. This section of the Draft EIR describes the key characteristics of the proposed project, including, among other things, a general overview of the BYSP approval process, project location, the components of the proposed project, and the required discretionary approvals. The project description set forth in this Chapter serves as the basis for the environmental analysis contained in this Draft EIR. The City is the lead agency for purposes of compliance with California Environmental Quality Act (CEQA) and is the land use agency with the discretionary authority to certify the EIR and take action on the proposed project.

2.1 - Specific Plan Background

Among other things, the BYSP defines parameters for the future development of the project site. Work on the BYSP began in the spring of 2021, with the City, the Barber Neighborhood Association, the property owner, and other key stakeholders invited to participate in community meetings. Four community meetings were held throughout 2021 to receive early input on the BYSP. The preliminary draft BYSP was submitted to the City in November 2021 for initial feedback. The Public Review Draft Specific Plan was published in 2023 and made available for review and comment and serves as the basis for this Project Description.

2.1.1 - Contents of the Specific Plan

The BYSP is organized into seven sections. The Specific Plan's sections and elements are as follows: Introduction, Vision, Land Use, Parks and Amenities, Streets and Mobility, Utilities, and Implementation.

Information found in the BYSP includes:

- The overall vision of the distribution, location, and extent of the uses of land within the BYSP Area are found in Sections 2.0 (Vision) and 3.0 (Land Uses).
- The proposed distribution, location, extent and intensity of major components of public and private transportation, wastewater, water, drainage, solid waste disposal, energy, and other essential facilities, infrastructure and improvements are found in Sections 4.0 (Parks and Amenities), 5.0 (Streets and Mobility), and 6.0 (Utilities).

- A program of implementation measures including development regulations, planned capital improvements, public works projects, and financing measures is found in Section 7.0 (Implementation).
- Standards and criteria by which development will proceed and, where applicable, standards of conservation, development, and utilization of natural resources is found in the Appendix: Development Standards.

Additional information about the foregoing can be found in the Public Review Draft Barber Yard Specific Plan, dated February 14, 2023.

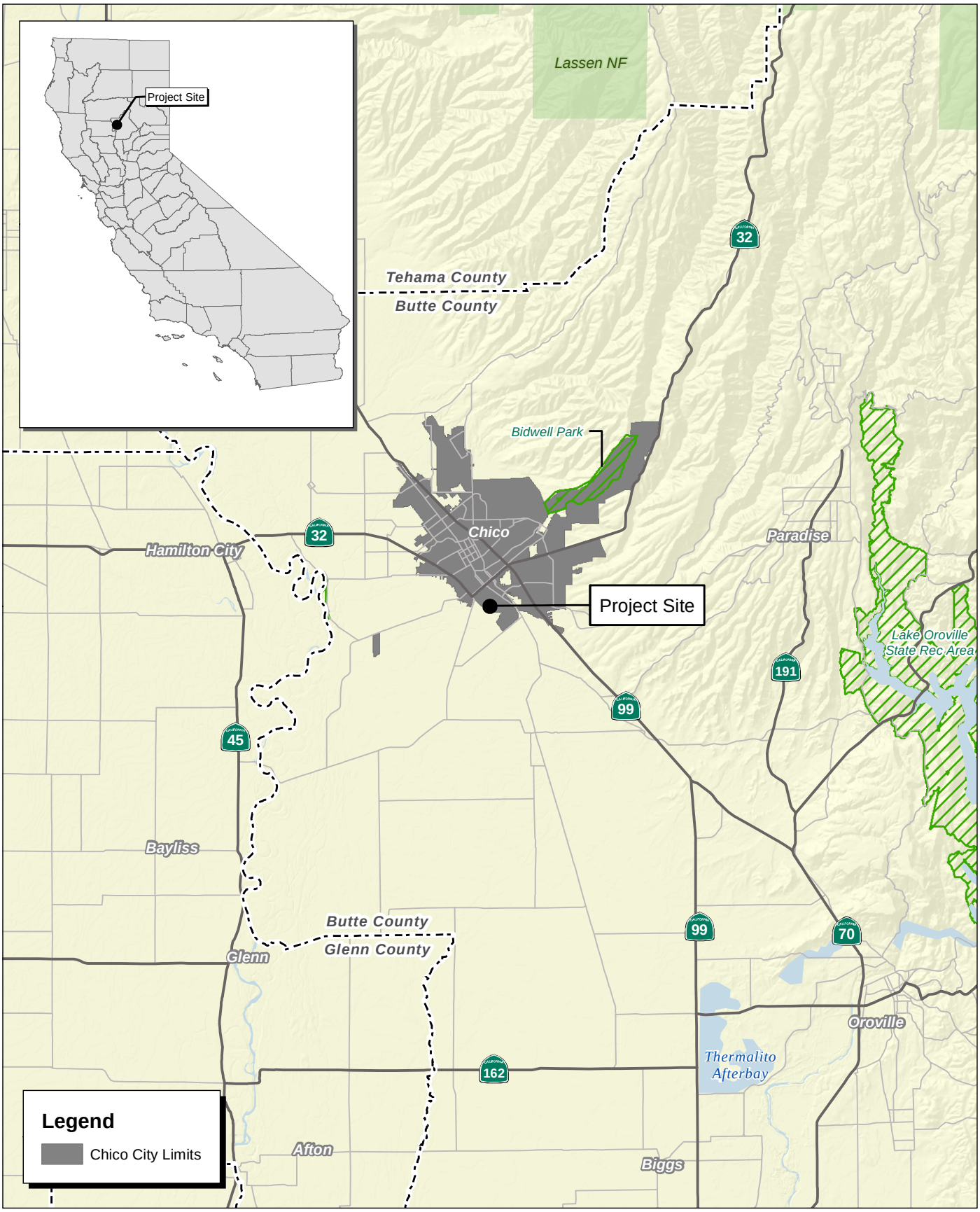
2.2 - Project Site Location and Setting

2.2.1 - Regional Location

The project site consists of the approximately 133-acre BYSP Area plus the approximately 16-acre off-site improvement area directly south of the BYSP Area (Exhibit 2-1, Exhibit 2-2a and Exhibit 2-2b).[1] The 133- acre BYSP Area is located in the City of Chico in Butte County, California, within the Sacramento Valley region in the central portion of Northern California. The 16-acre off-site improvement area is located in close proximity to the BYSP Area, with portions being in the City and the remaining portions being within unincorporated Butte County.

The City is located approximately 90 miles north of Sacramento and 30 miles east of Interstate 5 (I-5). The City is located on the State Route (SR) 99 corridor with the Town of Paradise to the east, and unincorporated land and communities to north, west, and south. The City encompasses approximately 22 square miles[2] and has a population of approximately 109,589 people as of January 1, 2024.[3] SR-32 and SR-99 comprise the City's regional transportation network and connect residents to Glenn, Plumas, Tehama, and Sutter counties.

[1] The off-site improvement area would be developed with a stormwater detention basin and associated storm drain alignment, as well as other utility and roadway/bike path improvements constructed to serve the BYSP Area.
[2] City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report. September.
[3] California Department of Finance (CDF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 11, 2024.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

FIRSTCARBON SOLUTIONS™

5 2.5 0 5 Miles

Exhibit 2-1
Regional Location Map

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CITY OF CHICO
BARBER YARD SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

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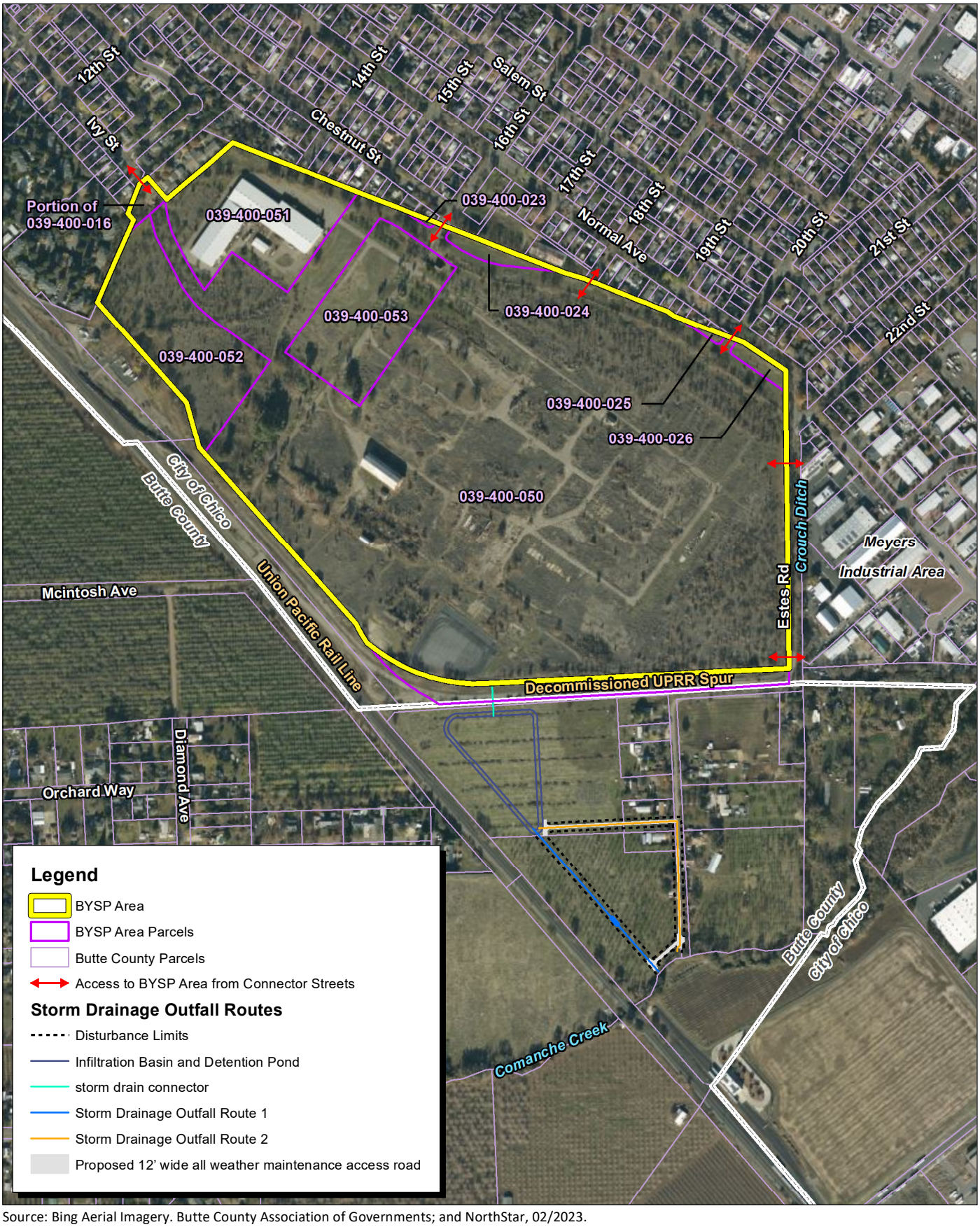

Source: Bing Aerial Imagery. Butte County Association of Governments; and NorthStar, 02/2023.

FIRSTCARBON SOLUTIONS™

650 325 0 650 Feet

Exhibit 2-2a
Project Site Map

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CITY OF CHICO
BARBER YARD SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

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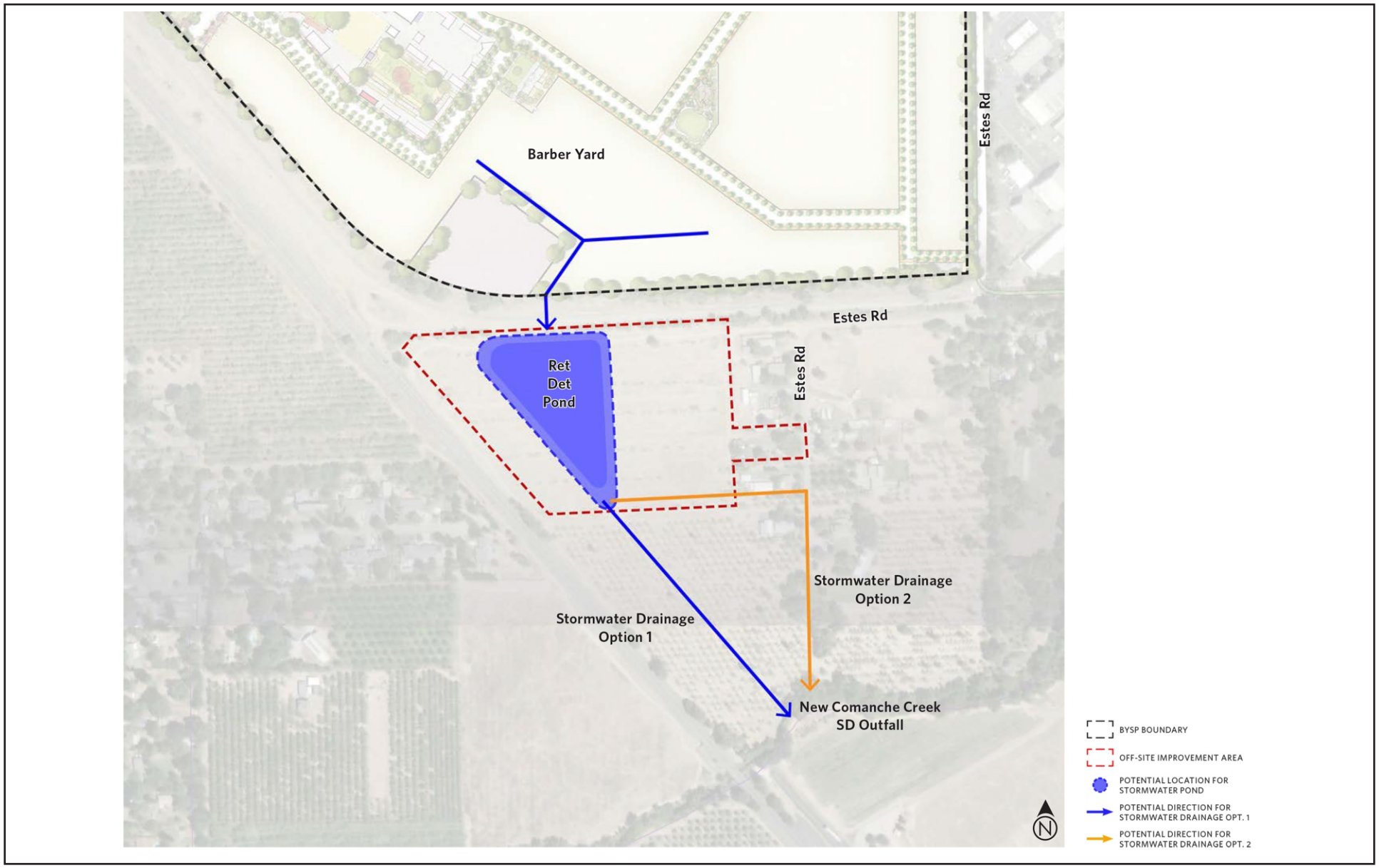

Source: Urban Design Associates, 02/01/2023.

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Exhibit 2-2b
Off-site Improvement Area

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2.2.2 - Local Setting

The approximately 133-acre BYSP Area is located in the southern portion of the City, as shown in Exhibit 2-2a. The BYSP Area is bounded by various individual properties to the northwest, Chestnut Street and Normal Avenue to the northeast, Estes Road to the east, and Union Pacific Railroad (UPRR) to the southwest. To the south, the BYSP Area is bounded by a decommissioned UPRR spur. Agricultural and rural residential areas lie farther to the south and west across the UPRR.

The proposed project also includes an approximately 16-acre off-site improvement area which is mostly located south of the BYSP Area, in unincorporated Butte County, on APN 039-410-025 (Exhibit 2-2a and 2-2b), and also includes various other public utility connections for a new storm drainage outfall and various public roadway/bike path connections around the perimeter of the BYSP Area. The off-site improvement area south of the BYSP Area is bounded by a Pacific Gas and Electric Company (PG&E) parcel to the north, rural residential and agricultural land uses to the east, agricultural land and Comanche Creek to the south, and the UPRR as well as more rural residential and agricultural land uses to the west.

2.3 - Existing Project Site Characteristics

The BYSP Area is generally flat and is fenced to prevent public access. The BYSP Area was the home of a factory operated by the Diamond Match Company in the early twentieth century. The factory closed in 1975. The Louisiana Pacific Corporation purchased the BYSP Area in 1984 and operated its Finished Wood Product Division and a remanufacturing facility until 1989. The BYSP Area was used by other owners for various industrial uses until all such uses terminated in 2004. Currently, uses consist primarily of abandoned structures and roadways in various states of disrepair, as well as existing Recreational Vehicle (RV) storage. Existing conditions are shown on Exhibit 2-3.

2.3.1 - Existing Structures

Three main buildings remain within the BYSP Area: the Engineering Building (approximately 17,200 square feet), the Shop (approximately 2,800 square feet), and the Warehouse (approximately 130,000 square feet) (Exhibit 2-3). The Engineering Building is a large, brick, shell structure that was used during the Diamond Match Factory era and has been deemed safe to refurbish (as detailed further in the Specific Plan). The small Shop building, also of brick construction and Diamond Match Factory era, is in fair condition. The Warehouse, which is in good condition, was built by Louisiana Pacific in the late 1980s and is currently leased for indoor RV storage.

Three additional, accessory buildings are also still present at the BYSP Area: an approximately 2,700-square-foot storage building adjacent to the Warehouse, an approximately 800-square-foot storage building located near the BYSP Area entrance on the south side of West 16th Street, and an approximately 600-square-foot storage building located between the Engineering Building and Shop.

A former, on-site apiary building was destroyed in a fire in 2004, but a single brick wall of the former structure is still evident today.

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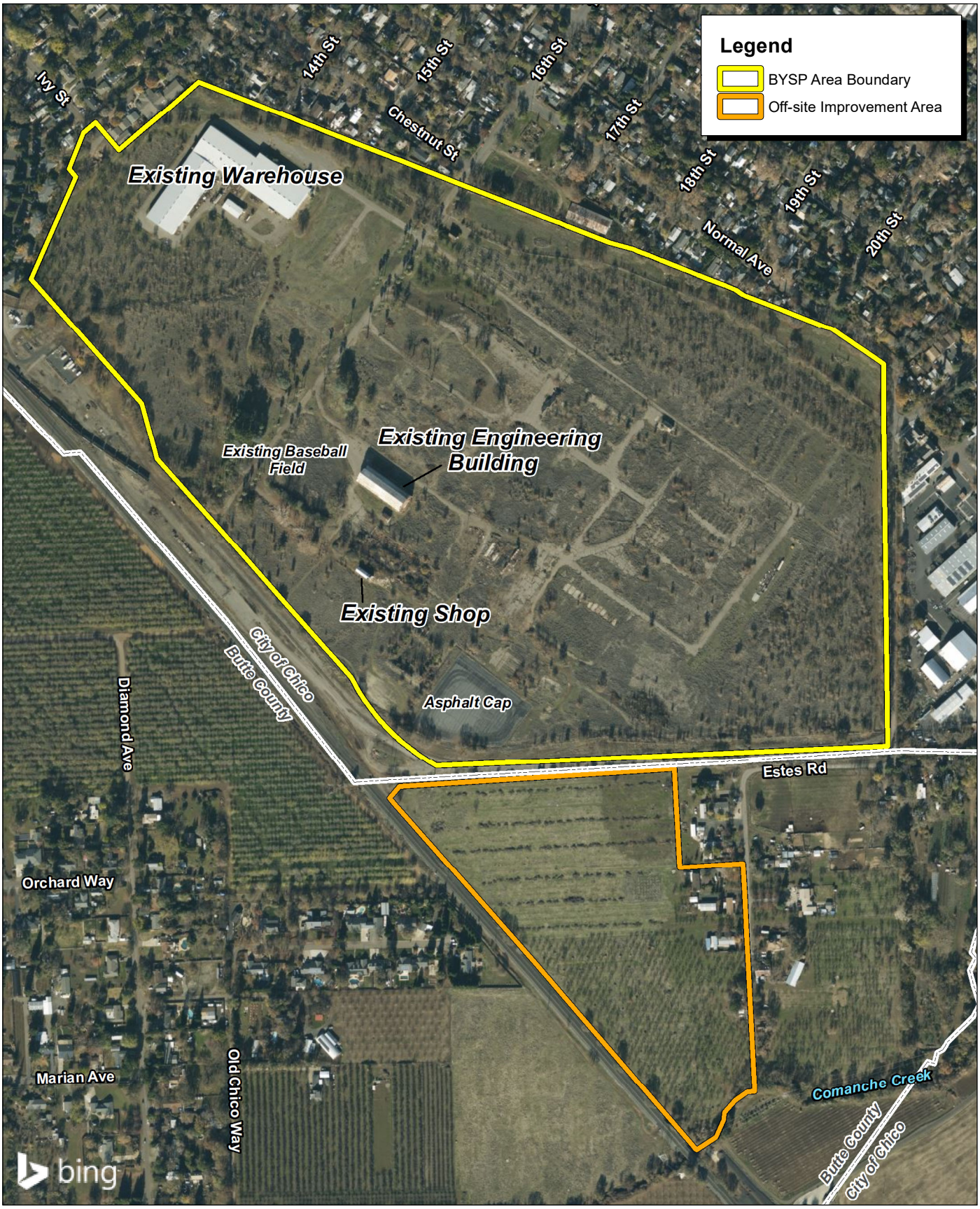

Source: Bing Aerial Imagery.

FIRSTCARBON SOLUTIONS™

525 262.5 0 525 Feet

Exhibit 2-3
Existing Conditions

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CITY OF CHICO
BARBER YARD SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

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2.3.2 - Existing Landscaping/Vegetation

Large palm trees line the former factory entrance road (an extension of 16th Street), and a small orchard of large palm trees is located near the end of the 16th Street extension, south of which is an area historically used as a baseball field. Significant areas of former orchards are evident on-site, located north, west, and south of the Warehouse, along the project's eastern border south of West 16th Street, and in the southern corner of the BYSP Area, bounded by Estes Road and the decommissioned UPRR spur. Landscaping and orchards have not been maintained for at least two decades, and many on-site trees have died due to prolonged neglect and lack of water. Weedy vegetation, aged orchards, and various trees persists throughout the BYSP Area.

Asphalt Cap

Approximately 3 acres of asphalt at the southwestern-most corner of the BYSP Area is known locally as the "asphalt cap." Remediated materials, including arsenic, are entombed under the asphalt cap, which is monitored by the California Department of Toxic Substances Control (DTSC) (See Section 3.8, Hazards and Hazardous Materials, for additional information).

Off-Site Improvement Area

The off-site improvement area is largely cleared and undeveloped, a portion of which is within areas of a former almond orchard. The proposed storm drain alignment options would be located within or along areas of former and existing orchard lands, rural residences on Estes Road, and/or in Estes Road (Exhibit 2-2b). The remaining portions of the off-site improvement area are within the City of Chico and consist of undeveloped public right-of-way and public utility connections.

2.3.3 - Existing Access

Currently, vehicular access is from West 16th Street, which runs east to west from the adjacent Barber Neighborhood to the BYSP Area. A network of streets in various states of disrepair is present on-site (Exhibit 2-2a). Ivy Street and the even-numbered streets parallel to West 16th Street (West 14th Street, 18th Street, 20th Street, and 22nd Street) lend themselves to being connected.

Currently, access to the off-site improvement area is provided by Estes Road.

2.3.4 - Existing Roadways

A network of current and formerly used roadways in various paved conditions are present on-site, particularly in the southern two-thirds of the BYSP Area. Formerly used roadways are largely overgrown with weedy vegetation and in disrepair.

2.3.5 - Existing Land Use Designations

Barber Yard Specific Plan Area

The Chico 2030 General Plan (General Plan) Land Use Element serves as a planning and regulatory document, provides a policy basis for decisions surrounding future growth of the City, and guides sustainable land use patterns. The Land Use Element includes descriptions of the City's land use designations and designates the BYSP Area as a "Special Planning Area" (SPA), specifically "SPA 2–

Barber Yard." The SPA designation identifies areas for significant new growth that require subsequent comprehensive planning and are to be developed as connected and complete neighborhoods with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. The General Plan Land Use Diagram (Figure LU-1 of the 2030 General Plan Land Use Element) conceptually identifies a mix of desired land uses within the SPA 2–Barber Yard, including "Low Density Residential," "Medium Density Residential," "Medium-High Density Residential," "High Density Residential," "Residential Mixed Use," "Office Mixed Use," "Industrial/Office Mixed Use," and "Secondary Open Space."

Surrounding Areas

Surrounding land use designations in the project vicinity include "Medium Density Residential" and "Medium-High Density Residential" to the northwest, "Low Density Residential" to the northeast and east, and "Manufacturing & Warehousing" to the southeast. The UPRR mainline to the southwest does not have a City land use designation. Land directly south of the BYSP Area and southwest of the UPRR mainline is outside of the City's Sphere of Influence (SOI) within the jurisdiction of Butte County. These areas have a County land use designation of Agriculture (AG).

Off-site Improvement Area

Those portions of the off-site improvement area located within the jurisdiction of Butte County are on parcels designated by the Butte County General Plan as AG. This unincorporated area is also identified by the California Department of Conservation California Important Farmland Finder as Prime Farmland.[4] Areas surrounding the off-site improvement area are also designated as AG.

2.3.6 - Existing Zoning

Barber Yard Specific Plan Area

The BYSP Area is zoned SPA by the Chico Zoning Ordinance. According to Section 19.40.030 of the Chico Municipal Code, all zoning districts may be compatible with the SPA General Plan designation if the zoning district is adopted as part of a specific plan or other comprehensive master plan for a Special Planning Area.[5]

Surrounding Areas

Surrounding zoning consists of "R1 Low Density Residential," "R2 Medium Density Residential," and "R3 Medium-High Density Residential," to the northwest, "R1 Low Density Residential," and "CN Neighborhood Commercial" to the northeast, and "R1 Low Density Residential," and "ML Light Manufacturing" to the east. The UPRR mainline is to the southwest and does not have a City land use designation.

[4] California Department of Conservation. 2022. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed October 11, 2024.
[5] City of Chico. 2024. Municipal Code, Chapter 19.40.030 Special Planning Areas. Website: https://codelibrary.amlegal.com/codes/chico/latest/chico_ca/0-0-0-15850. Accessed October 11, 2024.

Lands directly south of the BYSP Area, located within unincorporated Butte County, are zoned AG-40 under the County Code.

Off-site Improvement Area

Within Butte County, the unincorporated portion of the off-site improvement area and surrounding areas are zoned as AG-40.

2.3.7 - Historic Remediation

In 1991, DTSC issued an Imminent and Substantial Endangerment Determination for the BYSP Area, identifying elevated concentrations of arsenic in soils and pentachlorophenol (PCP) in groundwater, related to the past industrial uses of the BYSP Area and the adjacent railroad. In response, under DTSC's oversight, arsenic-contaminated soil was identified and contaminated groundwater was pumped and treated. Contaminated soils were consolidated on-site in the southern portion of the BYSP Area and remain capped under approximately 3 acres of asphalt, referred to as the "asphalt cap" (Exhibit 2-3).[6] The asphalt cap has been historically and continues to be monitored in perpetuity by DTSC, and future uses on the asphalt cap would be restricted to open space, ancillary surface parking uses as well as any other uses permitted by DTSC. More information on the historic remediation of the BYSP Area can be found in Section 3.9, Hazards and Hazardous Materials, of this Draft EIR.

2.4 - Project Components

2.4.1 - Proposed Project Summary

The proposed project consists of the full buildout of the BYSP, including off-site improvements, resulting in a mixed-use community accommodating a diverse range of housing opportunities with a mix of commercial, recreational and office uses located throughout. The following summarizes the main components of the BYSP. Further detail is provided in the sections following.

Residential Use

A maximum of 1,250 dwelling units is evaluated in this Draft EIR, pursuant to the residential unit cap set forth in the Specific Plan. Depending on the location within the BYSP Area, residential density would range from 4 to 35 units per gross acre. The types of housing products envisioned include single-family detached, pocket neighborhoods, bungalow courts, duplexes, townhouses, garden apartments, and apartments over commercial, as detailed more fully in the Specific Plan.

Commercial Uses

A total of approximately 210,000 square feet of commercial space is envisioned upon buildout. The three existing on-site buildings (Warehouse, Engineering Building, and Shop), totaling approximately 150,000 square feet, would be available for adaptive reuse (based on market and other conditions) for commercial uses, including a "Social Hub" centered around the existing Engineering Building. In addition, the proposed project involves an additional approximately 60,000 square feet of

[6] United States Army Corps of Engineers (USACE). Environmental Assessment and Finding of No Significant Impact (FONSI) for the Barber Debris Temporary Handling Facility 2018 California Wildfire. December 4, 2018.

commercial uses within a combination of new buildings incorporating residential uses above commercial/retail (mixed-use), as well as freestanding commercial/retail buildings. Overall, for the purposes of this Draft EIR, the following mix of uses has been conservatively assumed: commercial uses would consist of approximately 130,000 square feet of health/fitness club use, 40,000 square feet of retail plaza use, 22,800 square feet of restaurant use, and 17,200 square feet of event center use.

Recreational/Open Space Uses

At full buildout, a variety of potential future park, recreational, and open space amenities are contemplated by the BYSP including the Barber Pop-up, Social Hub, Diamond at Barber Yard, Athletics Facility, Dog Park, Picnic Grove, Ruins Park, and various neighborhood parks (e.g., the Yard). The timing of construction of the foregoing amenities would be dependent on a number of factors including any specific timing requirements set forth in the Specific Plan and/or Development Agreement as well as market and other conditions. The open space network within the BYSP is designed to provide, at full buildout, opportunities for a wide array of active and passive recreation uses to help meet the range of needs within the proposed project and broader community. In addition, the BYSP would preserve in perpetuity the approximately 3-acre asphalt cap area which would remain as open space, with the only additional permitted uses being ancillary surface parking and those other uses allowed by DTSC.

Off-site Improvements

Located within the approximately 16-acre off-site improvement area (Exhibit 2-2a and 2-2b), an approximately three- to five-acre combination water quality retention/detention basin (stormwater basin), access drive from Estes Road, and an associated storm drain alignment would be constructed to connect the BYSP Area and stormwater basin to a new outfall to Comanche Creek.[7] At this time, two potential storm drain alignment options are being considered, as shown on Exhibit 2-2b, and both alignment options are evaluated in this Draft EIR for purposes of conservative analysis, although only one would ultimately be developed. Alignment Option 1 would travel directly southeast from the stormwater basin to Comanche Creek within APN 039-410-039. Alignment Option 2 would traverse eastward from the stormwater basin to Estes Road where it would then turn south to Comanche Creek.

The proposed project also includes installation of various other public utility connections and various public roadway/bike path connections to existing public roadways at Estes Road and at West 14th, West 16th, West 18th, West 20th, and Ivy Streets.

2.4.2 - BYSP Land Use/Zoning Categories

The BYSP Land Use Designation Map (Exhibit 2-4a) and Zoning Map (Exhibit 2-4b) illustrate the location of proposed land use designations and associated zoning, as well as proposed roadway alignments.

[7] There is no existing access to or from the decommissioned UPRR spur parcel between the BYSP Area and off-site improvement area. Temporary access across the parcel would be required for construction of the stormwater basin and would reduce construction traffic on the southern portion of Estes Road.

Source: Urban Design Associates, 02/01/2023.

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Exhibit 2-4a
Land Use Map

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Source: Urban Design Associates, 02/01/2023.

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Exhibit 2-4b
Zoning Map

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The proposed project land use designations and associated zoning are shown in Table 2-1 along with the total proposed acreage and the estimated units and/or square footage per land use/zone taking into consideration reasonable development assumptions and the residential unit/commercial caps set forth in the BYSP. As explained in more detail in the BYSP, there are a number of residential land use designations and associated zoning that each have a fairly broad density range to ensure some degree of flexibility in site planning to accommodate changing economic, market and other considerations. However, there is also a residential unit cap, which would serve as a maximum number of residential units that could be built within the BYSP Area without triggering the need for additional CEQA review. There is also a commercial square footage cap, as described more fully in the BYSP. Each land use and associated zoning category are further discussed below.

Table 2-1: Proposed Land Use Designations/Zoning

Land Use Designation	Zoning	Approximate Gross Acres	Permitted Density Units/Gross Acre	Dwelling Units Assumed	Max Nonresidential Square Feet Allowed
Mixed-Use Land Use Designations					
Residential Mixed Use (RMU)	RMU	15	10-20	180 units	80,000 square feet*
Mixed-Use Land Uses Total	–	*15*	–	–	
Residential Land Use Designations					
Medium Density Residential (MDR)	R2	79	4-14	632 units	0
Medium-High Density Residential (MHDR)	R3	26	14.1-35	438 units	130,000 square feet**
Residential Land Uses Total	–	*105*	–	–	
Open Space Land Use Designations					
Primary Open Space (POS)	OS1	3	N/A	0	0
Secondary Open Space (SOS)	OS2	10	N/A	0	0
Open Space Land Uses Total	–	*13*	–	–	
Off-site Stormwater Detention Basin (APN 039-410-025)					
Agriculture (unincorporated County)	AG-40 (Butte County)	13.5	N/A	0	0
Total–BYSP Area	**–**	**133**	**N/A**	**1,250 Unit Cap**	**210,000 square feet Cap**
Total-Off-site Improvement Area	**–**	**16*** **	**–**	**–**	**–**

Notes:
* Includes adaptive reuse of approx. 17,200-square-foot Engineering Building and 2,800-square-foot Shop.
** Includes adaptive reuse of approx. 130,000-square-foot Warehouse.
*** Total off-site improvement area includes the storm water basin and related outfall infrastructure alignments, as well as miscellaneous street connections at Estes Road and at Ivy, W. 14th, W. 16th, W. 18th, and W. 20th Streets.

2.4.3 - Proposed Barber Yard Specific Plan Land Use Designations/Zoning Descriptions

The BYSP proposes to implement the following five land use designations and associated zoning within the BYSP Area as shown in Exhibit 2-4a and Exhibit 2-4b. Lot development standards for each zoning type are provided in Table 3.3 of the BYSP.

Residential Mixed Use Land Use Designation

The Residential Mixed Use (RMU) land use designation is characterized by a mix of residential and nonresidential development at medium to high densities. It allows for a range of commercial, office, and residential uses to be located on the same property, either vertically or horizontally. It does not preclude development that is entirely residential, although it does encourage (although not require) a mix of uses. Additionally, other primary uses may be allowed by right or with approval of a Use Permit, as outlined in the BYSP and the City Municipal Code. The Engineering Building, which would be available for adaptive reuse as a pavilion, would be equipped to host occasional commercial events open to the public; and the Shop, which would also be available to be adaptively reused for commercial use, both fall within this designation.

Residential Mixed Use Zoning

The associated Residential Mixed Use (BYSP-RMU) zoning is intended to implement the Residential Mixed Use land use designation. Permitted densities range from a minimum of 10 to a maximum of 20 units per gross acre. There is no minimum floor area ratio (FAR). The maximum FAR is 0.75. The BYSP reduces minimum lot size relative to the City's base zoning to promote the inclusion of smaller businesses and entrepreneurs.

Medium Density Residential Land Use Designation

Most of the BYSP Area would be designated for Medium Density Residential (MDR) uses, primarily intended for single-family detached homes on small lots as well as duplex and single-family attached homes such as townhouses as additional housing product to serve a variety of households.

Medium Density Residential Zoning

The associated Medium Density Residential (BYSP-R2) zoning is intended to implement the MDR land use designation. The BYSP-R2 zoning would be applied to areas appropriate for medium density residential development with a mixture of housing types, including single-family homes as well as multi-family residential projects, such as duplexes and townhouses. The development standards and other requirements of the BYSP-R2 zoning are intended to help ensure overall compatibility with adjacent existing neighborhoods, such as the adjacent Barber Neighborhood, while providing for additional compatible development. Permitted densities range from a minimum of 4 units to a maximum of 14 units per gross acre. BYSP-R2 development standards in the BYSP include opportunities to reduce lot sizes to allow more compact development.

Medium-High Density Residential Land Use Designation

Medium-High Density Residential (MHDR) land use designation is proposed along the BYSP Area's western edge as a transition between traditional single-family neighborhoods and the UPRR corridor,

similar to the existing Pine Tree Apartment complex to the northwest. The existing Warehouse is within this land use designation and may be adaptively reused as an indoor/outdoor athletic facility.[8] Dwelling types within the MHDR designation may include townhouses, garden apartments, and other forms of multi-family housing. Land within this designation may also be used for retention/detention basins.

Medium-High Density Residential Zoning

The associated Medium-High Density Residential (BYSP-R3) zoning is intended to implement the MHDR land use designation. It is applied to areas appropriate for medium-high density residential neighborhoods. Permitted densities range from a minimum of 14.1 to a maximum of 35 units per gross acre. As previously indicated, the existing Warehouse is within the BYSP-R3 district and may be adaptively reused as an indoor/outdoor athletic facility. Centralized mini storage to serve any resident within the BYSP Area is also permitted within this zoning district.

Primary Open Space Land Use Designation

The Primary Open Space (POS) land use designation is typically used in the City to protect areas with sensitive habitats, groundwater recharge areas, and areas subject to flooding. In the proposed BYSP, the asphalt cap would be classified under this land use designation to ensure that it is maintained in its current, open space state, except for permitted ancillary surface parking as well as other uses allowed by DTSC.

Primary Open Space Zoning

The associated Primary Open Space (BYSP-OS1) zoning district is intended to implement the Primary Open Space land use designation. As previously indicated, it applies to the existing asphalt cap that is currently monitored by the DTSC. New uses within the BYSP-OS1 district are restricted to open space and ancillary surface parking (for which the Chico Municipal Code Section 19.70.060 E.2 requirements related to parking lot tree shade would not apply) or other uses as otherwise permitted by DTSC.

Secondary Open Space Land Use Designation

The Secondary Open Space (SOS) land use designation covers land intended to be used for both intensive and non-intensive park and recreational activities, such as active and passive parks, other types of recreational amenities, and trails. The BYSP incorporates a wide variety of passive and active parks and recreational facilities for residents, visitors, and their pets. The existing baseball field is included within the SOS.

Secondary Open Space Zoning

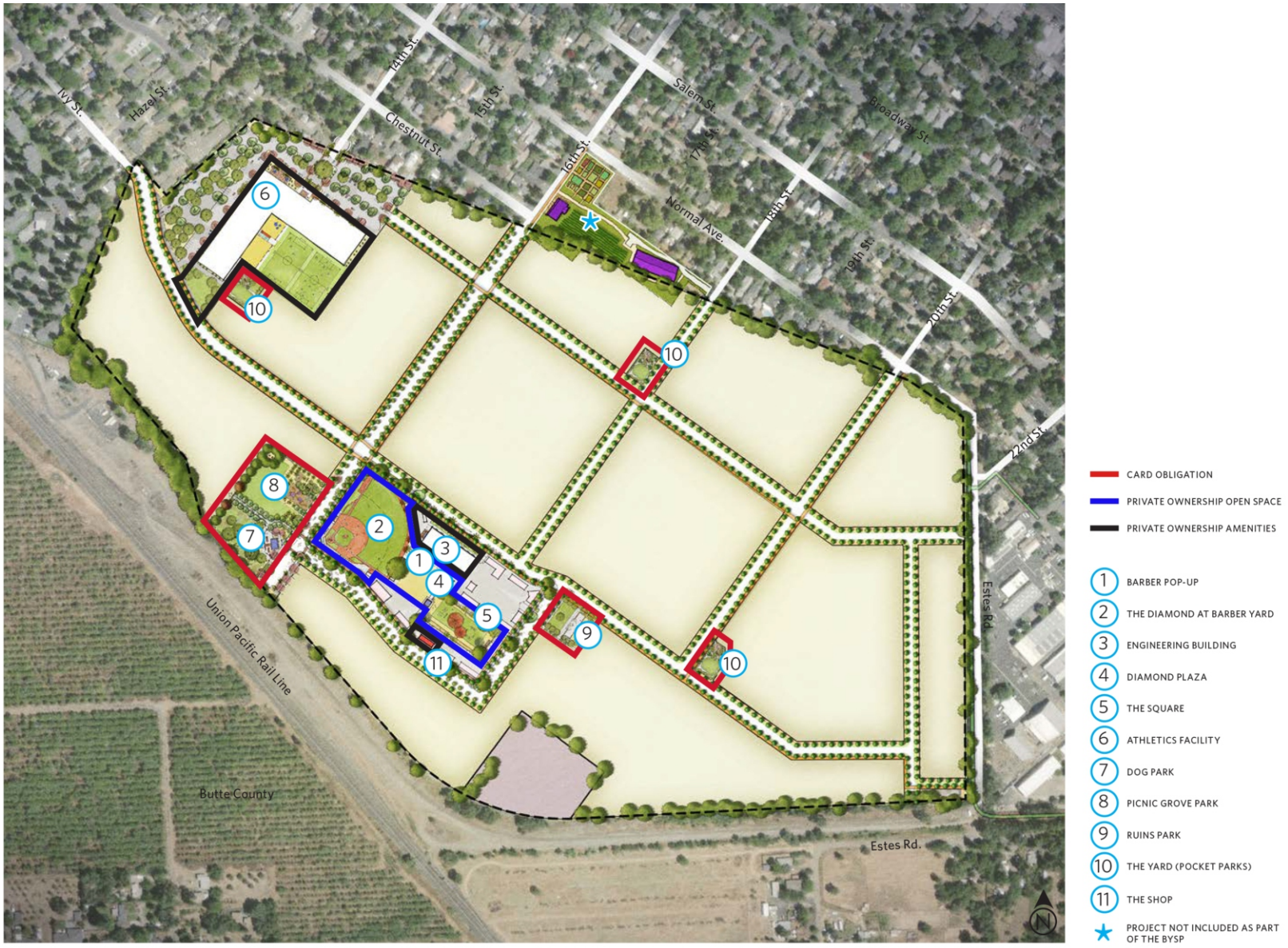
The associated Secondary Open Space (BYSP-OS2) zoning is intended to implement the Secondary Open Space land use designation. As previously indicated, this zoning would be applied to areas appropriate for both intensive and non-intensive park and recreational activities, such as active and passive parks, trails, and other similar uses. The BYSP incorporates a wide variety of passive and

[8] The existing Warehouse is included in the MHDR/BYSP-R3 designation and zone to allow for residential uses should adaptive reuse related to an athletic facility not occur. Land within this designation may also be used for retention/detention basins.

active parks and recreational amenities for residents, visitors and their pets including the potential restoration and reuse of the existing baseball field and preservation of existing tree stands. Other features included in the BYSP-OS2 district include the Barber Pop-up, Diamond Plaza, The Square, Dog Park, Picnic Grove Park, Ruins Park, and The Yard (pocket parks). These are discussed in further detail in Section 2.4.3, Parks and Facilities, below.

2.4.4 - Parks and Facilities

The BYSP contemplates a variety of potential future park, recreational and open space amenities, totaling approximately 15.8 acres, which are further described below and illustrated on Exhibit 2-5. Note that the ultimate timing, scope and design of all park, recreational, and open space amenities would be finalized as part of the design/site plan review process in connection with each individual development proposal and would be in accordance with the relevant provisions of the BYSP and Barber Yard Development Agreement. Table 2-2 provides the approximate acreage for the proposed parks and recreational facilities.



Source: Urban Design Associates, 02/01/2023.

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Exhibit 2-5
Parks and Amenities

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Table 2-2: Parks and Amenities Land Use, Zoning, and Acreage

Feature	Land Use/Zoning	Approximate Acreage
Barber Pop-up	SOS/BYSP-0S2	0.56[1]
The Diamond at Barber Yard	SOS/BYSP-0S2	2.40
Engineering Building	RMU/BYSP-RMU	1.10
Diamond Plaza	RMU/BYSP-RMU	1.37
The Square	SOS/BYSP-0S2	1.05
Athletics Facility	MHDR/BYSP-R3	5.00
Dog Park	SOS/BYSP-0S2	1.04
Picnic Grove Park	SOS/BYSP-0S2	1.86
Ruins Park	SOS/BYSP-0S2	0.80
The Yard (pocket parks)	SOS/BYSP-0S2	1.00
The Shop	RMU/BYSP-RMU	0.16
Total	–	**15.78**

Notes:
BYSP = Barber Yard Specific Plan
BYSP-0S2 = Barber Yard Specific Plan Secondary Open Space BYSP-R3 = Medium-High Density Residential
BYSP-RMU = Barber Yard Specific Plan Residential Mixed Use MHDR = Medium-High Density Residential
RMU = Residential Mixed Use SOS = Secondary Open Space
* It is anticipated that Chico Area Recreation District would be responsible for the operation and maintenance of the Dog Park, Picnic Grove Park, Ruins Park, and The Yard (pocket parks), totaling approximately 4.7 acres. The remaining elements are anticipated to be operated and maintained via private ownership.
[1] The Barber Pop-up acreage coincides with the Diamond Plaza acreage; therefore, the Barber Pop-up acreage is not included in the Total to avoid double counting.
Source: Barber Yard Specific Plan 2023.

Social Hub

The BYSP contemplates a potential future Social Hub, located in the central western portion of the BYSP Area. The Social Hub would consist of the Diamond, Diamond Plaza, the Engineering Building, the Shop, and the Square. The general vision for this area is to provide opportunities for a community-scaled amenity featuring commercial, recreational, and entertainment uses. Each of these features is discussed below.

The following describes the parks, facilities, and open space as listed in Table 2-2 and illustrated on Exhibit 2-5.

Barber Pop-Up

The first phase of activation is anticipated to be a “pop-up,” which would involve temporary events that include food sales, retail, and similar uses to create an interesting, interim community destination in this area relatively early on. The Pop-Up would be a transitional use in the area that would eventually be developed as Diamond Plaza.

The Diamond at Barber Yard

The Diamond is envisioned to be built on the same ground as the Diamond Match Company's baseball field and could involve an expandable field that pays homage to the storied past of the Trolley Baseball League and supports new recreational and entertainment uses.

The Engineering Building

The BYSP envisions adaptive reuse of the Diamond Match Factory Engineering Building (approximately 17,200 square feet), to initially serve as a flexible social gathering and commerce space. The ultimate internal uses in this building, including service areas, storage space, event space, and more, would be determined in detail by the developer prior to applying for a use permit.

Ultimately this building could be converted to residential loft spaces and/or mixed-use.

The Diamond Plaza

The open, central Diamond Plaza would be supported by adjacent retail, recreation, mixed-use buildings, and open space. This space would be designed as a flexible event space for all occasions, hosting small scale live music, outdoor movies, craft fairs, and pop-up food events. It would also function as a central meeting place, serving all the businesses and residents in the neighborhood.

The Square

This recessed free play area would create places for social gatherings, events, music, or smaller parties. Bocce courts would host casual pickup games contributing to the activation of the area. The sunken plaza would be surrounded by seating and include areas to support mixed-use activity and provide spectator views into the Diamond Plaza. The square would be flanked by commercial and mixed-use buildings, such as the Shop. Various new and existing surfaces are anticipated to include turf, decomposed granite, existing concrete slabs and blocks, and repurposed crushed materials from the BYSP Area. The Square is not intended to be used for stormwater management. Further activation in the future could incorporate play areas, such as pickleball or basketball.

Athletics Facility

The BYSP plans for adaptive reuse of the large warehouse (approximately 130,000 square feet) at the north end of the BYSP Area as an indoor-outdoor athletics facility, with multiuse fields, an indoor court, and fitness concepts, among other amenities. Portions of the building could also be used for centralized mini storage to serve any resident within the BYSP Area.

Dog Park

For purposes of this analysis, this feature is assumed to be located near the Social Hub and would serve BYSP Area residents and visitors with large and small dogs providing an outdoor area for play and off-leash training.

Picnic Grove Park

For purpose of this analysis, this feature is assumed to be located adjacent to residences and would act as a recreational opportunity for project residents and guests. Inclusive play structures and picnic/barbeque areas are contemplated to be located throughout, as appropriate.

Ruins Park

For purposes of this analysis, this feature is assumed to be located on the foundation ruins of the Apiary building from the Diamond Match Factory era and would serve as a unique passive outdoor amenity featuring an elevated platform for events and ceremonies or day-to-day passive recreational use.

The Yard

Embedded in residential areas throughout the BYSP Area, this type of pocket park would offer active recreational opportunities aimed at families and young children. Inclusive play structures and picnic areas are contemplated to be located in these types of parks.

2.4.5 - Utilities

The proposed project would connect to existing utilities to the northwest, northeast, east, and south of the BYSP Area. Each utility system is described below.

Water

California Water Service (Cal Water) provides potable water to the City of Chico. The City's water system consists of four separate Pressure Zones (based on elevation). The BYSP Area is located in Pressure Zone 350. The proposed water improvements for the BYSP Area consist of a conventional on-site water system with mains, services, and fire hydrants designed in accordance with applicable City of Chico and Cal Water requirements. Water connections would be made at all abutting City streets including Ivy Street, West 14th Street, West 16th Street, West 18th Street, and West 20th Street. According to the Water Supply Assessment (WSA) prepared for the BYSP, sufficient water supply is available from Cal Water's supplies to meet all existing and planned future demands within the existing service area as well as those associated with buildout of the BYSP.

Wastewater

The City of Chico provides wastewater collection and treatment within the City. The June 2013 Sanitary Sewer Master Plan Update[9] as well as other relevant updated sewer information and analysis concluded that the existing system and treatment plant have adequate capacity for the BYSP. The on-site sewer improvements would consist of a conventional on- site gravity sanitary sewer system with mains, manholes, and laterals designed in accordance with applicable City of Chico Design Standards. The on-site sanitary sewer mains would collect wastewater from the proposed project and direct it south to the 33-inch sewer main on the southern edge of the BYSP Area within the decommissioned UPRR spur.

[9] City of Chico. 2013 Sanitary Sewer Master Plan Update. Website: https://chico.ca.us/documents/Departments/Public-Works/SewerStorm-Drain-Engineering/2013-Sanitary-Sewer-Master-Plan-Update/_ssmpu_final.pdf. Accessed October 11, 2024.

Stormwater Drainage

The City of Chico provides a storm drainage collection and disposal system. The BYSP Area is designated as its own separate drainage basin and is tributary to Comanche Creek.

Though previously developed, the BYSP Area is generally clear of existing storm drainage features except for minor culverts and low swales that convey surface runoff to the southwest corner to a small retention basin that would be removed as part of the proposed project. Existing off-site drainage features include the existing ditch along the BYSP Area's southern boundary that drains to a large culvert (>72-inch diameter) under the railroad tracks.

The proposed storm drain system for the BYSP Area would consist of a conventional on-site storm drain system with mains, catch basins, and maintenance holes designed in accordance with applicable City of Chico Storm Drain Master Plan and design standards. The storm drainage system would collect runoff and direct it to a combination water quality and retention/detention basin (stormwater basin) to be located within the approximately 16-acre off-site improvement area (Exhibit 2-2a and Exhibit 2-2b). Storm events exceeding the 2-year storm would be slowly released to Comanche Creek through a new City outfall. Two alignment options are being considered and evaluated in this Draft EIR for the routing and configuration of the outfall (Exhibit 2-2b), although only one would be built. Alignment Option 1 travels directly southeast from the stormwater basin to Comanche Creek. Alignment Option 2 traverses eastward from the stormwater basin to Estes Road where it then turns south to Comanche Creek. Only one of these options would ultimately be developed.

Table 2-3: Off-site Improvement Area

Feature	APN	Butte County Land Use/Zoning	Area of Potential Disturbance (Acres)
Stormwater Basin	039-410-025	AG/AG-40	13.5[1]
Stormwater Drainage Option 1	039-410-025/039	AG/AG-40	0.90
Stormwater Drainage Option 2	039-410-025/039/068	AG/AG-40	1.20
Total	**–**	**–**	**15.6**

Notes:
APN = Assessor's Parcel Number
[1] 13.5 acres includes the majority of parcel number 039-410-025; however, actual temporary and permanent disturbance areas would be far less as the stormwater basin is expected to be less than 4 acres in size.
Source: Barber Yard Specific Plan 2023; FirstCarbon Solutions (FCS) 2023.

Solid Waste and Recycling

The City's franchised waste and recycling hauler for the BYSP Area is North Valley Waste Management.[10] Each residential unit and commercial use within the proposed project would be

[10] City of Chico. 2020. Trash and Recycling. Website: https://chico.ca.us/City-Services/Trash--Recycling/index.html. Accessed October 11, 2024.

responsible for collecting their waste and recycling. Trash receptacles would be staged in the alleys during collection days as needed to provide adequate service to the tenants, with collection anticipated one day a week. In addition, businesses that generate four cubic yards or more of commercial solid waste per week, or multi-family residential dwellings of five or more units, would be required to arrange for recycling services. Businesses would be permitted to use self-haul recyclables to a recycling facility, arrange for pickup of materials by a non-profit or another entity, or subscribe for recycling services from a City-permitted waste hauler. Solid waste would be hauled to the Neal Road Landfill and green yard waste would be hauled to the Neal Road Landfill or the City's compost facility located near the Chico Municipal Airport.

Electricity and Natural Gas

The proposed project would be required to comply with applicable state law and requirements for natural gas. A proposed electrical system, including underground conduits, wires, above-ground transformers and other miscellaneous vaults, would connect to the existing facilities to the northwest and northeast of the project site (likely at Ivy and West 16th Streets) and extend throughout the BYSP Area. PG&E provides electricity and natural gas to the residents and businesses within the City and County. PG&E has provided the proposed project with a "will serve" letter for electric services. The BYSP includes energy-saving technologies that would be incorporated into the proposed project through implementing sustainable building practices, including materials and mechanical systems that reduce energy consumption. Solar photovoltaic energy systems would be included in all homes pursuant to applicable Title 24 requirements. Garages and parking lots would be Electric Vehicle ready pursuant to applicable Title 24 requirements.

The electrical system would be installed in a joint trench that would also include conduits and sub-structure for other dry utilities, including telecommunications, cable, fiber, and public street lighting. The joint trench would be extended through the project drive aisles to provide dry utility services to each proposed building.

2.4.6 - Circulation, Access, and Parking

The BYSP is designed to be flexible and adaptive to future mobility needs and opportunities. Specific Transportation Demand Management (TDM) strategies and requirements shall be those as set forth in the approved TDM plan for each individual development proposal and as otherwise provided for in this EIR (see Section 3.17, Transportation) and the Barber Yard Development Agreement.

Roadway Network

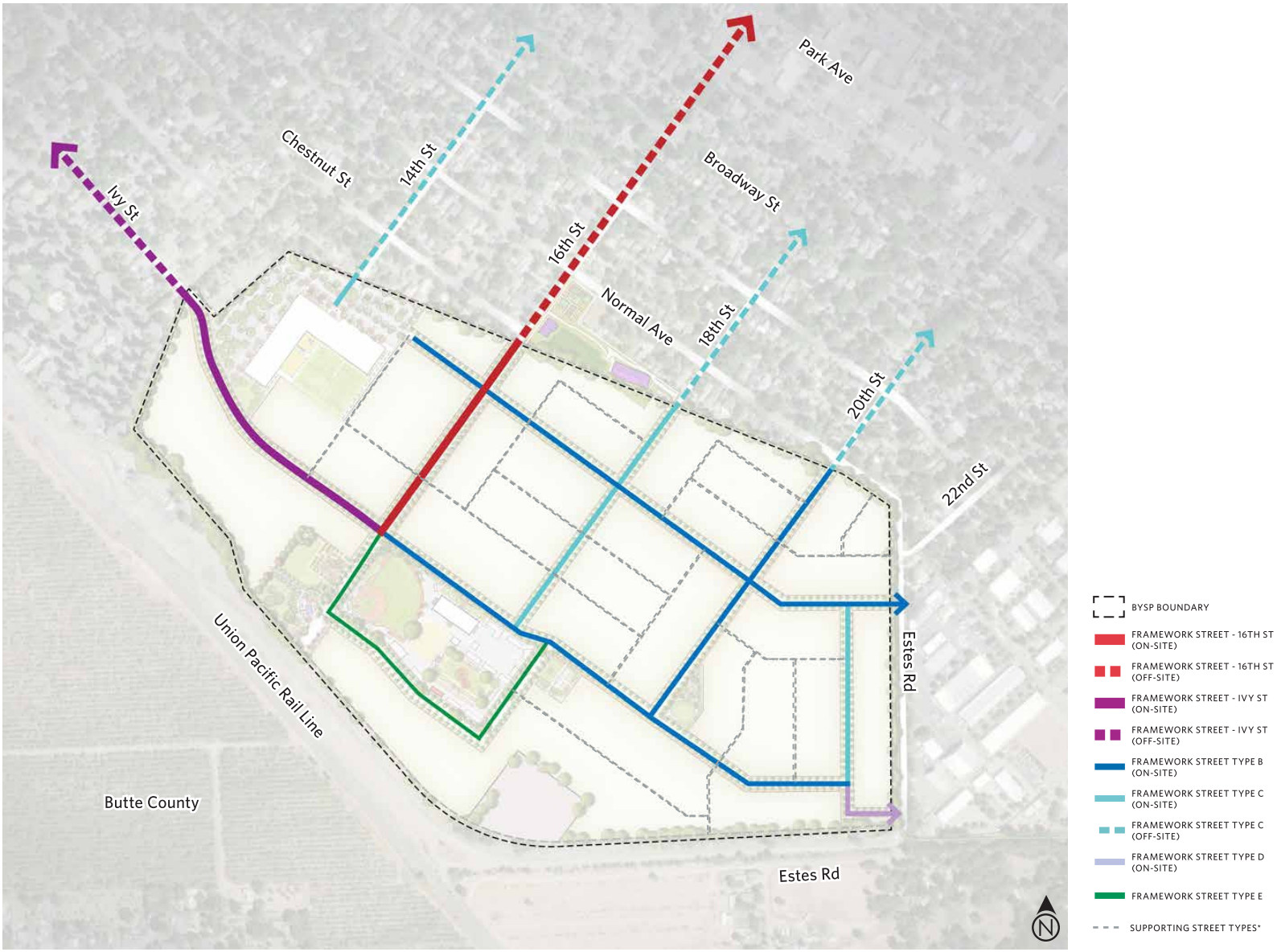
The BYSP contemplates an organized, connective network of streets that adequately services the BYSP Area, as illustrated in Exhibit 2-6. Primary access to the BYSP Area would be provided via extensions of the even-numbered streets between 14th Street and 20th Street, as well as Ivy Street, as further described below. The BYSP includes three street classifications to accommodate varying uses, connect land uses within the BYSP Area, and appropriately distribute traffic in and out of the surrounding neighborhood. The three street classifications—Framework Streets, Supporting Streets, and Alleys—are discussed in further detail in the BYSP Section 5.1.

Off-Site Roadway Connections

The proposed extensions of Ivy Street and West 16th Street would serve as primary access points to the active areas of the BYSP Area, including the Athletics Facility, the Social Hub, and Parks. New extensions of West 14th Street, West 18th Street, and West 20th Street would also provide off-site roadway connections. Some roadwork would occur outside the BYSP Area to make these connections but would be minimal in area and would occur within existing street right- of-way.

Bicycle and Pedestrian Network

The adjacent Barber Neighborhood's existing gridded street system provides opportunities for a high level of pedestrian and bicycle accessibility and connectivity with multiple direct travel paths between destinations. As described more fully in the BYSP, it is anticipated that on-site, major streets, designated in the BYSP, would have separated bicycle/pedestrian paths that separate bicyclists and pedestrians from adjacent vehicle traffic, improving safety. The proposed project's on-site bicycle network would include interconnected multiuse paths, Bike Paths (Class I), and Bike Routes (Class III) (See Exhibit 2-7). On-street and off- street bicycle parking facilities would be provided pursuant to applicable Code requirements throughout the BYSP Area. Subject to applicable state laws and regulations, the bicycle network could also be used by e-bikes and motorized and non-motorized scooters. Multiuse paths, sidewalks, and paseos would be utilized as primary pedestrian paths throughout the BYSP Area (see Exhibit 2-8). Bicycle and pedestrian networks are further discussed in BYSP Sections 5.4 and 5.5.



Source: Urban Design Associates, 11/11/2022.

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Exhibit 2-6
Street Framework

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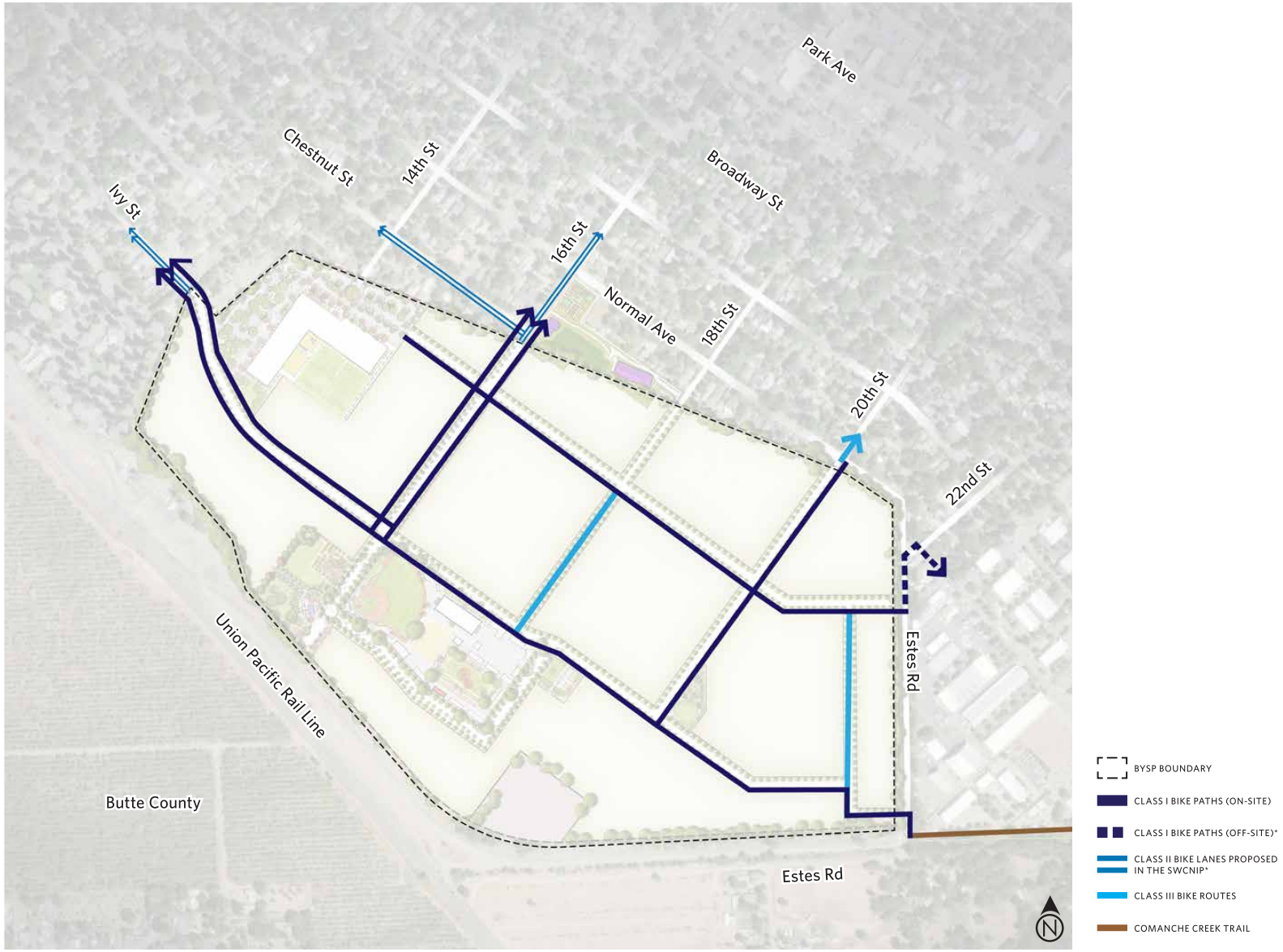

Source: Urban Design Associates, 11/11/2022.

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Exhibit 2-7
Bicycle Infrastructure Plan

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Figure 5.9 Pedestrian infrastructure plan

Source: Urban Design Associates, 11/11/2022.

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Exhibit 2-8
Pedestrian Infrastructure Plan

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Parking

Parking for motor vehicles and bicycles would be regulated by applicable provisions of Title 19 of the Chico Municipal Code, except as otherwise specified within the BYSP. Parking for residents would be accommodated within each residential lot or provided to serve each unit for multi-family developments. Users of public amenities, including the Social Hub, athletics center, recreational areas, and others, would be accommodated with both on-street and off-street parking areas pursuant to applicable requirements.

Public parking areas would be distributed near or within the public open spaces, parks, and major commercial and recreational destinations in the BYSP Area. Additional ancillary surface parking would be made available on the asphalt cap. All Framework Streets, and selected Supporting Streets, would provide on-street parking. The actual number of on-street parking spaces and surface spaces on the asphalt cap would be determined as part of processing each individual development proposal pursuant to applicable requirements. Garages and parking lots would provide electric vehicle charging stations pursuant to applicable state law and regulations.

Public Transportation

The existing public transit system in Chico is Butte Regional Transit or the B-Line. The closest routes to the BYSP Area follow Park Avenue, with stops on 13th Street and 17th Street, which are a significant distance from the BYSP Area. As illustrated on Exhibit 2-9, on-site B-Line stops, pull-outs, and shelters are envisioned along Ivy Street and 16th Street, subject to approval by the appropriate agencies.

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Source: Urban Design Associates, 02/01/2023.

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Exhibit 2-9
Preliminary B-Line Transit Plan

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Rail

The BYSP Area is bounded by the UPRR to the southwest. For informational purposes, the following is noted. The North Valley Passenger Rail Strategic Plan (strategic plan), being developed by the Butte County Association of Governments (BCAG), includes a potential option to extend passenger rail services from Sacramento to the Chico area. Work on the strategic plan began in early 2022 and is continuing; however, no specific proposals or plans have been circulated and the scope and content of the potential strategic plan are unknown. If services are extended to Chico, the two options being considered are expanding the existing boarding platform at the depot on West 5th Street or constructing a new platform and stop location adjacent to Barber Yard. If the strategic plan were to be implemented, construction is anticipated to start in fall of 2026 to 2028, with service beginning in 2029 and beyond.[11]

Because of the uncertainty regarding rail development that could potentially serve the BYSP Area and vicinity in the future, and because the project proponent does not control in any fashion whether and to what extent any such rail development could be provided in the future and thus does not propose any discretionary approvals that would involve such rail development, this Draft EIR does not evaluate the potential construction of a rail line and associated environmental impacts because doing so would be entirely speculative. Nonetheless, in an effort to accommodate any such future rail development should it occur in the future, the project proponent is willing to set aside a specified portion of land for a period of time (as set forth in the BYSP Development Agreement) to be reserved for a future bus interface, along the northwest edge of the asphalt cap, described in the Barber Yard Development Agreement.

2.4.7 - Landscape Features

Landscape Features and Fencing

Gateways

To call attention to the unique industrial past and the existing natural features on-site, two metal and brick gateways are anticipated (spanning 16th Street) as well as a pillar/post monument (at Ivy Street) to be constructed at the BYSP Area entrances on Ivy Street and 16th Street. Construction materials could be partially sourced from on-site rubble to the extent feasible. Some existing California fan palms lining 16th Street would be retained, to the extent feasible, in addition to planting mid-sized street trees, such as ginkgo or madrone trees, which would help to shade the sidewalks and bike infrastructure.

Northern and Eastern Neighborhood Edge

The BYSP Area abuts parcels in the existing Barber Neighborhood to the north and east. Should the proposed Athletics Facility surface parking lot abut these properties, a landscape buffer (including existing mature trees) and a fence or wall would be designed and implemented to help screen the view, to the extent feasible, from the Barber Neighborhood to parked cars. For most other portions of this boundary, a minimum 20-foot buffer (free of structures) behind any buildings would be required to help create an appropriate transition and extension to the adjacent Barber Neighborhood.

[11] Butte County Association of Governments (BCAG). 2024. North Valley Passenger Rail Strategic Plan. Website: https://northvalleyrail.org/wp-content/uploads/2024/07/nvprsp-final-report-20240516.pdf. Accessed October 11, 2024.

Individual development proposals in this area would be required to use reasonable efforts to retain healthy, mature existing trees in the buffer, to the extent feasible.

Estes Road

The southeastern edge of the BYSP Area parallels Estes Road, which separates Barber Yard from the Meyers Industrial Area. In order to minimize, to the extent feasible, connections and interference with any adjacent light industrial and manufacturing uses, residential lots would be oriented such that a side or rear yard would be adjacent to this edge. An appropriate landscape buffer, including mature trees (where feasible) would be retained to help maintain the rural character for the area and screen views into the industrial uses.

UPRR and Decommissioned Spur

The southern edge of the BYSP Area abuts unincorporated Butte Country territory, including a decommissioned UPRR spur, with agricultural lands beyond. The BYSP includes a proposed metal security fence along this boundary.

The southwestern edge of the BYSP Area abuts the active UPRR line. For safety purposes, a fence would be installed along the length of this boundary to keep the two properties physically separated, although this requirement is subject to the BYSP property owner obtaining all necessary approval(s) from UPRR and any other public agencies with jurisdiction over aspects thereof.

Lighting and Furnishings

Exterior lighting within the BYSP would be designed to be consistent with applicable City standards and guidelines. Streetlights would be consistent with the overall streetscape palette for the BYSP. Although the ultimate design would be determined as part of each individual development proposal's design/site plan review process, streetlight design style would generally be simple with clean lines. Lower 12-foot light-emitting diode (LED) light standards and 42-inch-tall bollards would guide pedestrians in public areas.

Street furniture includes all items placed within the public right-of-way such as benches, trash receptacles, plant containers, tree grates and guards, bicycle racks, and bollards, as appropriate, to be determined as part of the subsequent entitlement process for each individual development proposal.

Landscape Palette

The BYSP's landscape palette provides guidelines for the planning and development and streetscapes, street trees, and other landscape feature throughout the BYSP Area. The ultimate scope and design of the landscape palette would be finalized as part of the design/site plan review process in connection with each individual development proposal and would be required to adhere to the relevant provisions of the Barber Yard Development Agreement.

For streetscapes, concrete is preferred for primary pedestrian circulation elements with the incorporation of repurposed brick, asphalt, and/ or decomposed granite (or similar materials) for open space and accent areas are encouraged.

The inclusion of street trees would be guided, as appropriate, by the City of Chico Approved Street and Parking Lot Tree list. A curated list of recommended street trees is provided in the BYSP (BYSP Table 4.3). All street trees must be approved by the City's Urban Forester pursuant to applicable City requirements and standards. The BYSP also includes lists of recommended park trees, groundcovers/shrubs/grasses, and vines.

2.4.8 - Phasing and Construction Timeline

For the purposes of the analysis herein, the overall construction timeline for the proposed project is expected to occur over 17 years, between 2024 and 2041, in accordance with the preliminary development schedule illustrated in Exhibit 2-10.[12] Precise development schedules would be further refined and finalized as part of the subsequent development process for individual development proposals. Because of market fluctuations over time as well as other factors, it is impossible to predict with precision the exact timing for buildout.

The proposed project's preliminary development schedule does not include construction "phases;" however, for the purposes of conservative analysis, and based on information available at the time of preparation of this Draft EIR, it is anticipated that any necessary demolition and/or soil hauling would occur within the first two years of development (between 2024 and 2025) and the majority of construction would occur within the first ten years of development. It is also assumed that the Social Hub would be constructed in the first year of development.

[12] To the extent construction starts later than 2024, this Draft EIR reflects a conservative analysis given that emissions would continue to decrease due to the more stringent regulatory framework that would govern.

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PA	Acreage*	Zone	Dwelling Units Assumed
1	8.9	R3	219
2A	2.0	R2	66
2B	2.7	R2	35
2C	5.4	R2	44
2D	1.7	R2	17
3	1.4	RMU	27
4	4.9	R2	52
5	9.0	R2	62
6	4.6	RMU	75
7	4.8	RMU	19
8	6.6	R3	219
9	8.2	R2	71
10	10.4	R2	69
11	2.6	RMU	25
12	1.4	RMU	34
13	5.4	R2	52
14	3.9	R2	32
15	13.0	R2	67
16	12.7	R2	65
17	10.3	R3	0
18	0.8	RMU	0
Total	120.7	-	1,250

*Note: The acreage shown is approximate.

Source: Urban Design Associates, 02/2023.

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Exhibit 2-10
Draft Development Schedule

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2.5 - Project Objectives

The objectives of the proposed project are to:

- Develop the BYSP in an economically viable manner as an extension of the Barber Neighborhood.
- Preserve and celebrate the BYSP Area's rich history to foster a strong sense of place.
- Direct development in proximity to and with connections to the existing Barber Neighborhood, Downtown, and Chico State, supporting the efficient use of land through higher density.
- Create a wide range of housing opportunities and choices that are generally smaller than the average unit size in Chico and focused on providing options to broad segments of the community.
- Encourage a variety of transportation choices, including access to public transit, support for people-powered modes, and accommodation of emerging technologies.
- Create walkability throughout the BYSP Area and with connections to the surrounding neighborhood.
- Encourage a mix of land uses including a central Social Hub for new residents, the broader neighborhood, and the Chico community.

2.6 - Intended Uses of this Draft EIR

This Draft EIR has been prepared by the City to assess the potential environmental impacts that may arise as a result of the proposed project. Pursuant to CEQA Guidelines Section 15367, the City is the Lead Agency for the proposed project and has discretionary authority over the proposed project and related land use approvals, entitlements and permits. The Draft EIR is intended to address all infrastructure improvements and all other development as described in this Chapter 2 that are within the parameters of the proposed project.

It is the express intent of the City that this Draft EIR be used to fulfill the requirements of CEQA's available streamlining procedures to the extent permitted by applicable laws and regulations.

Individual development proposals to implement the BYSP would be reviewed by the City for consistency with the General Plan, Specific Plan, Zoning Ordinance, and this EIR, and additional environmental review would be conducted, if and to the extent required by CEQA; however, this Draft EIR has been prepared with the goal of streamlining future environmental review.

2.6.1 - Discretionary and Ministerial Actions

The proposed BYSP is a policy-level planning document as well as a regulatory document that would be utilized to implement the land use vision set forth therein, as reflected by specific individual development proposals to be considered by the City after the Specific Plan is approved. The BYSP would be adopted by the Chico City Council, after review and recommendation by the Planning

Commission. Concurrent therewith, it is anticipated the City and the owner(s) of the BYSP Area would enter into a statutory Development Agreement to, among other things, vest rights to develop the BYSP Area as contemplated under the Specific Plan.

Future discretionary approvals involving tentative subdivision or parcel maps, design/site plan review, and use permits are anticipated to implement the Specific Plan. If it is determined that a future discretionary approval is consistent with the BYSP and is within the scope of this Draft EIR, further environmental review would likely not be necessary and instead be subject to applicable CEQA streamlining provisions. For example, Section 65457(a) of the California Government Code and Sections 15182(a) and 15183 of the CEQA Guidelines encourage streamlining and provide that no subsequent EIR or negative declaration is required for any residential project undertaken in conformity with an adopted Specific Plan for which an EIR has been certified. Later projects will be reviewed relative to these and other applicable streamlining provisions, the information in this EIR, and the standards set forth in Public Resources Code Section 21166 and other relevant CEQA provisions to determine whether further environmental review is required.

This EIR is intended to apply to the following discretionary approvals, as well as to any and all other future discretionary approvals that may be necessary or desirable to implement the proposed project:

- Approval of Barber Yard Specific Plan
- Rezone of the BYSP Area to SPA-2–BYSP
- Conforming General Plan Amendments
  - Land Use Diagram and text amendments to reflect the BYSP
- Conforming Zoning Amendments
  - Zoning map and zoning text amendment to add zoning overlay to implement the BYSP
- Disposition and Development Agreement
- Tentative Subdivision/Parcel Maps
- Site Design and Architectural Review
- Grading Permits
- Tree Removal Permits

As discussed further under Section 2.5.2, Responsible and Trustee Agencies, other public agencies may have jurisdiction over aspects of the proposed project in which case this Draft EIR is intended to be utilized for purposes of Responsible and Trustee Agency consideration.

2.6.2 - Responsible and Trustee Agencies

A number of other agencies may have jurisdiction over aspects of the proposed project and thus would serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR would provide environmental information to these

agencies and other public agencies, which may be coordinated with other agencies, as part of project implementation. These agencies may include, but are not limited to, the following:

- United States Army Corps of Engineers (USACE)
- United States Fish and Wildlife Service (USFWS)
- California State Water Resources Control Board (State Water Board)
- California Department of Fish and Wildlife (CDFW)
- Central Valley Regional Water Quality Control Board (Central Valley RWQCB)
- Butte County Air Quality Management District (Butte County AQMD)
- County of Butte Department of Toxic Substances Control (DTSC)

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CHAPTER 3: ENVIRONMENTAL IMPACT ANALYSIS

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts as required under CEQA for those environmental topics where it was determined in the Notice of Preparation (NOP), or through subsequent analysis, that the proposed project would result in "potentially significant impacts." Sections 3.1 through 3.18 discuss the environmental impacts that may result with approval and implementation of the proposed project.

Issues Addressed in this Draft EIR

This Draft EIR and the attached supporting materials, studies, and reports have been prepared to evaluate the potential environmental impacts of the proposed project as required under CEQA. It discloses the identified mitigation measures, where necessary, to avoid or reduce impacts to the extent feasible.

The following environmental issues are addressed in Chapter 3:

- Aesthetics, Light, and Glare
- Agriculture Resources and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Wildfire

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Draft EIR. If the EIR identifies any significant and unavoidable impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why specific economic, legal, social, technological, or other benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. The City, in its discretion as lead agency, determined to develop and utilize thresholds based on criteria from the CEQA Guidelines (Appendix G checklist); State, federal, regional, and local regulatory schemes;

local/regional plans and ordinances; accepted practices; consultation with recognized experts; and other professional opinions.

Impact Analysis and Mitigation Measure Format

Each resource area analyzed in this Chapter includes the subsections summarized below.

Introduction

This subsection summarizes what will be discussed in the respective environmental topic section, states generally what informational documents are used as the basis for the section, and indicates what related comments, if any, were received during the NOP public scoping period.

Environmental Setting

This subsection describes the existing, baseline physical conditions of the project site and surroundings (e.g., existing land uses, transportation conditions, noise environment, etc.) with respect to each resource topic at the time the NOP was issued. Conditions are described in sufficient detail and breadth to allow a general understanding of the environmental setting such that the environmental impacts of the proposed project are disclosed.

Regulatory Framework

This subsection describes the relevant federal, State, regional, and local regulatory requirements that are directly applicable to the environmental topic being analyzed.

Methodology

This section describes the approach used to analyze potential impacts of the proposed project.

Thresholds of Significance

The significance thresholds for each environmental impact are defined, along with a discussion of the methodological approach to the analysis, where applicable, in order to explain how the significance thresholds have been applied to evaluate the impacts of the proposed project.

Proposed Project Impacts and Mitigation Measures

This subsection evaluates the proposed project's impacts and the respective assessments and findings, applying the following levels of significance:

- No impact. A conclusion of no impact is reached if no potential exists for impacts or if the environmental resource does not occur in the project site or the area of potential impacts.
- Less than significant impact. This determination applies if the impact does not exceed the defined significance criteria or would be eliminated or reduced to a less than significant level through compliance with existing local, State, and federal laws and regulations. No mitigation is required for impacts determined to be less than significant.

- Less than significant impact with mitigation. This determination applies if the proposed project would result in a significant impact, exceeding the established significance criteria, but feasible mitigation is available that would reduce the impact to a less than significant level.
- Significant and unavoidable impact. This determination applies if the proposed project would result in an adverse impact that exceeds the established significance criteria and no feasible mitigation is available to reduce the impact to a less than significant level. Therefore, the residual impact would be significant and unavoidable.
- Significant and unavoidable impact with mitigation. This determination applies if the proposed project would result in an adverse impact that exceeds the established significance criteria and, although feasible mitigation might lessen the impact, the residual impact would remain significant, and, therefore, the impact would be unavoidable.

The format adopted in this Draft EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1:	**An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement. Impacts are defined in terms of their context and intensity. Context is related to the uniqueness of a resource; intensity refers to the severity of the impact. Where applicable, Best Management Practices (BMPs) or project improvement measures, or both, are incorporated into the proposed project as project design features to limit the potential for a significant impact. In addition, where relevant, compliance with applicable laws and regulations as part of a comprehensive regulatory framework are incorporated into the impact analysis. Where necessary, feasible mitigation measures are identified for significant impacts to limit the degree or lower the magnitude of the impact; rectify the impact by repairing, rehabilitating, or restoring the affected environment; or compensate for the impact by replacing or providing substitute resources or environments. These impacts conclude with a finding of less than significant impact with mitigation. Where no mitigation measures are necessary, relevant impacts are concluded to be less than significant or to have no impact.

In some cases, following the impact discussion, reference is made to State and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable and local land use plans that particularly or fully mitigate the impact may be cited.

Level of Significance Before Mitigation

This subsection identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

As part of the impact analysis, mitigation measures are identified, where feasible, for impacts considered significant or potentially significant consistent with CEQA Guidelines Section 15126.4, which states that an EIR "shall describe feasible measures which could minimize significant adverse impacts." CEQA and other applicable laws require that mitigation measures have an essential nexus and be roughly proportional to the significant impact identified in the EIR. The relevant applicant (in connection with individual specific development proposals) is required to implement all identified mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP), as further discussed in the findings and conditions of approval adopted for the approval of the proposed project, and the lead agency (in this case, City of Chico) is responsible for overseeing the relevant applicant's implementation of such mitigation measures. Pursuant to CEQA Guidelines Section 15126.4, mitigation measures are not required for environmental impacts that are found not to be significant.

Project-specific mitigation measures are set off with a summary heading and described using the format presented below:

MM AES-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact it is associated with (**AES-1** in this example); mitigation measures are numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AES	Aesthetics, Light, and Glare
AG	Agriculture and Forest Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources and Tribal Cultural Resources
ENER	Energy
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials

Code	Environmental Issue
HYD	Hydrology and Water Quality
LAND	Land Use
NOI	Noise
POP	Population and Housing
PUB	Public Services
REC	Recreation
TRANS	Transportation
UTIL	Utilities and Service Systems
WILD	Wildfire

Cumulative Impacts

Cumulative impacts of the proposed project are discussed within each topical subsection of this Draft EIR. An EIR must discuss cumulative impacts when (1) they are significant and (2) the project's incremental contribution to any identified significant cumulative impact is "cumulatively considerable." The discussion of cumulative impacts analyzes the cumulative impacts of the proposed project, taken together with other past, present, and reasonably foreseeable future projects producing related impacts, within an identified geographic scope of review. As explained further herein, the goal of this analysis is to determine whether the overall long-term impacts of all such projects would be cumulatively significant and, if so, to determine whether the proposed project itself would cause a "cumulatively considerable" incremental contribution to any such cumulatively significant impacts. To determine whether the overall long-term impacts of all such projects would be cumulatively significant, the analysis generally considers the following:

- The geographic area in which impacts of the proposed project would be experienced.
- The nature of the impacts of the proposed project that are expected in the area.
- Other past, proposed, and reasonably foreseeable projects that have had or are expected to have impacts in the same area.
- The impacts or expected impacts of these other projects.
- The overall impact that can be expected if the individual impacts from each project are allowed to accumulate.

"Cumulative impacts" refers to two or more individual impacts that, when considered together, are considerable, or that compound or increase other environmental impacts (CEQA Guidelines § 15355). Cumulative impacts can result from individually minor but collectively significant impacts taking place over time (CEQA Guidelines § 15355(b)). The purpose of the cumulative impact analysis is to avoid considering projects in a vacuum; without this analysis, piecemeal approval of several projects with related impacts could lead to severe environmental harm.

As noted above, an EIR must discuss cumulative impacts when they are significant and the project's incremental impact is "cumulatively considerable." If the analysis determines that the potential exists for the project, taken together with other past, present, and reasonably foreseeable future projects, to result in a significant or adverse cumulative impact, the analysis then determines whether the project's incremental contribution to any significant cumulative impact is itself significant (i.e., "cumulatively considerable"). However, an EIR need not discuss cumulative impacts that do not result in part from the proposed project (CEQA Guidelines § 15130(a)(1)).

The approach to analysis for assessing cumulative impacts typically varies depending on the topic being analyzed. It should consider all sources of related impacts, not just similar sources or projects, and should define the relevant area affected in its analysis of cumulative impacts.

CEQA Guidelines (Section 15130 [b][1]) state that the information utilized in an analysis of cumulative impacts should come from one of two sources:

A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency, or

B. A summary of projections contained in an adopted General Plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impact analysis in this Draft EIR uses both methods (i.e., a "blended" approach), as appropriate and as described more specifically in each cumulative impact subsection, including projects as listed in Table 3-1 and General Plan growth projections. The cumulative impact analysis for each individual resource topic is presented in each resource section of this chapter immediately after the description of the individual project impacts and identified mitigation measures.

The geographic area in which cumulative impacts are considered varies depending on the specific environmental topic and is identified in the Cumulative Impacts subsection of each section of Chapter 3. For instance, for utilities and service systems, the area considered is the service area of each utility provider; and the geographic scope of air quality is the Northern Sacramento Valley Air Basin, which is the air basin where the project site is located.

Table 3-1 lists the relevant cumulative projects considered for this environmental analysis and Exhibit 3-1 shows the locations of the cumulative projects. Projects within 1 mile of the project site that are either under construction or have been approved by the City (in terms of discretionary review) as of the date the NOP was published were included for the purposes of analysis herein.

Table 3-1: Cumulative Projects

Jurisdiction	Project Name	Project Type	Units/Square Footage (approx.)	Location	Approximate Distance from Project Site (miles)	Status
City of Chico	Self Storage Ph 3	Commercial Project	31,000 square feet	2260 Park Avenue	0.22	Under Construction

Jurisdiction	Project Name	Project Type	Units/Square Footage (approx.)	Location	Approximate Distance from Project Site (miles)	Status
City of Chico	Commercial Renovation	Commercial Project	5,400 square feet	330 Main Street	0.74	Under Construction
City of Chico	Sierra Nevada Warehouse	Commercial Project	80,000 square feet	1085 East 20th Street	0.75	Under Construction
City of Chico	Riley's Apartments	Multi-Family Project	22 units	West 5th Street/Ivy Street	0.58	Approved
City of Chico	Jamboree Housing	Multi-Family Project	58 units	1297 Park Avenue	0.39	Under Construction
City of Chico	The Graduate	Multi-Family Project	53 units	344 East 8th Street	0.62	Approved
City of Chico	Renewal Center (Transitional Housing)	Multi-Family Project	29 units	2216 Fair Street	0.41	Under construction

Sources: City of Chico. 2023. Active Development Map. Website: https://chico.ca.us/documents/Departments/Community-Development/Planning-Division/Development-Activity-Map/ActiveDevelopmentMap.pdf. Accessed December 9, 2024.

City of Chico. 2023. City of Chico Development Activity Table. Website: https://chico.ca.us/documents/Departments/Community-Development/Planning-Division/Development-Activity-Map/ActiveDevelopmentTable.pdf. Accessed December 9, 2024.

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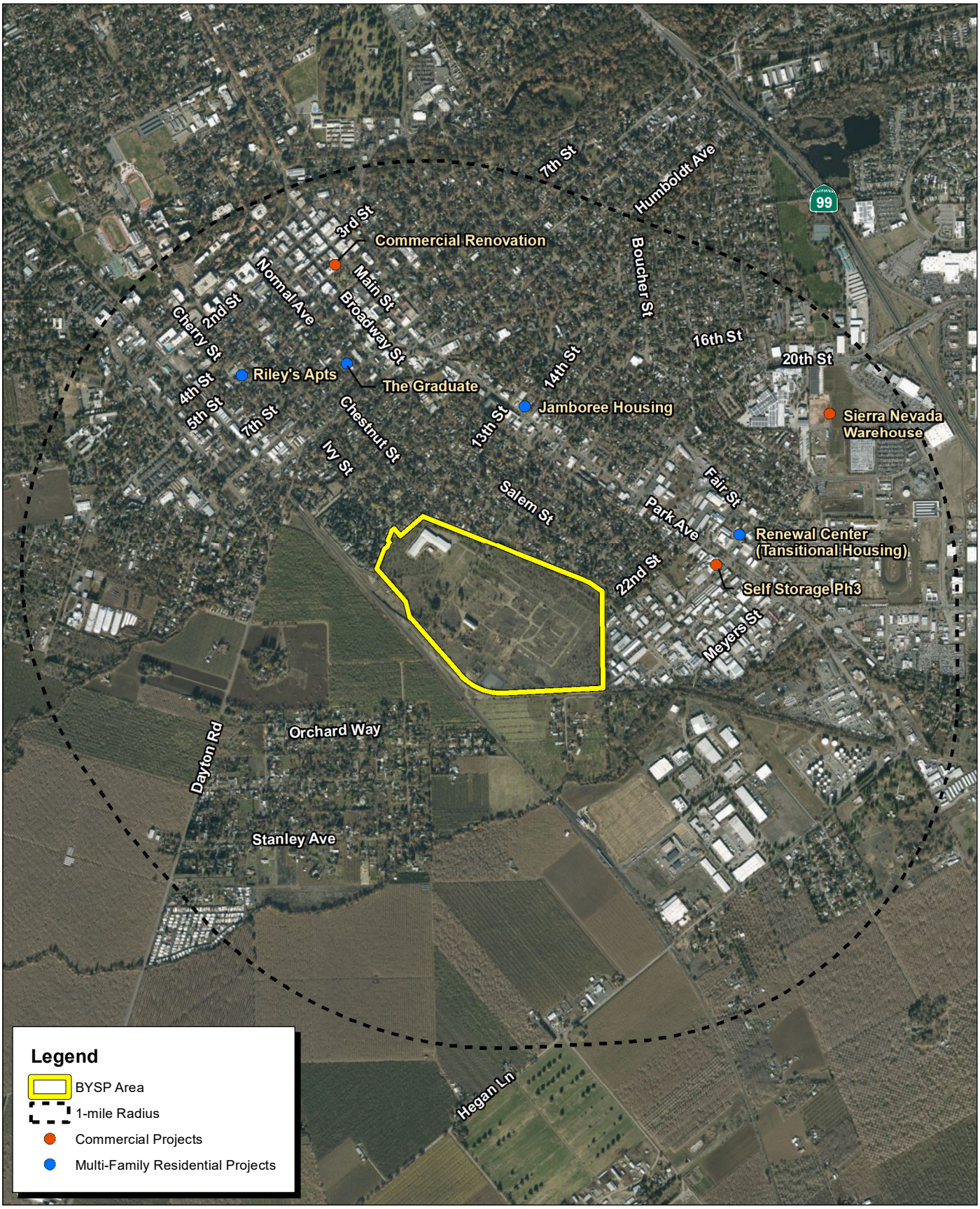

Source: Bing Aerial Imagery. Butte County Association of Governments; and NorthStar, 05/2023.

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Exhibit 3-1
Cumulative Project Locations

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3.1 - Aesthetics, Light, and Glare

3.1.1 - Introduction

This section describes the existing aesthetics, light and glare conditions on the project site and in the vicinity, as well as the relevant regulatory framework. This section also evaluates the potential impacts related to aesthetics, light and glare that could result from implementation of the proposed project. Descriptions and analysis in this section are based on, in part, on-site reconnaissance by FirstCarbon Solutions (FCS), as well as review of the Chico 2030 General Plan (General Plan), Chico Municipal Code (Municipal Code), and the City of Chico Design Guidelines Manual.

The following public comments were received during the Notice of Preparation (NOP) scoping period related to aesthetics, light and glare:

- All historic palm trees and/or the entry boulevard to the project site should be preserved.
- Only single-story units should be constructed where the Barber Yard Specific Plan (BYSP) Area abuts the existing Barber Neighborhood on Normal Avenue and Chestnut Street.
- Generalized concerns over light pollution.
- The proposed project does not reflect the character of the existing Barber Neighborhood and recommends designing proposed dwelling units within the BYSP Area along Normal Avenue and Chestnut Street to resemble existing homes in the neighborhood.
- Generalized concerns over insufficient green space.

3.1.2 - Environmental Setting

Visual Character

Regional Setting

The City of Chico, population 109,589,[1] is located in the northern portion of the Sacramento Valley at the transition from the Central Valley floor and agricultural lands to the west and the Southern Cascade/Sierra Nevada foothills to the east. State Route (SR) 99 generally marks the edge between the valley floor and where the elevation begins to rise in the foothills, and crosses through the City from northwest-to-southeast. The Union Pacific Railroad (UPRR) also crosses the City in a northwest-to-southeast direction. Chico is the largest City in Butte County, as well as in the region between the Sacramento metro area and Redding. The City is characterized by a traditional grid-pattern downtown area that features a number of historic buildings, with more modern development at the periphery.

The topography in the area in and around the City is bisected northeast to southwest by several waterways, including Butte Creek, Big Chico Creek, Little Chico Creek, Comanche Creek/Edgar Slough, and Mud Creek/Sycamore Creek, which flow into the Sacramento River west of the City

[1] California Department of Finance (DOF). 2022. E-1 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024. Accessed October 9, 2024.

limits. Notable landmarks in Chico include Bidwell Park, Chico State University, and the Senator Theater. Bidwell Park stretches over 10 miles along Big Chico Creek from the Sierra Nevada foothills to the valley floor and can be seen from several vantage points.

Project Site

The project site consists of the approximately 133-acre BYSP Area, located in the City of Chico, plus an approximately 16-acre off-site improvement area located directly south of the BYSP Area in unincorporated Butte County (Stormwater Alignment Option Areas).

The BYSP Area was the home of a factory operated by the Diamond Match Company in the early twentieth century and closed in 1975. The Louisiana-Pacific Corporation purchased the BYSP Area in 1984 and operated its Finished Wood Product Division and a remanufacturing facility until 1989. The BYSP Area was used by other owners for various industrial uses until its abandonment in 2004. Within the BYSP Area today there are three existing buildings including the Engineering Building (approximately 17,200 square feet), the Shop (approximately 2,800 square feet), and the warehouse (approximately 130,000 square feet) (Exhibit 3.1-1a). The Engineering Building and the small Shop building are of brick construction. Three additional, accessory structures are also still present at the BYSP Area: an approximately 2,700-square-foot storage building adjacent to the warehouse, an approximately 800-square-foot storage building located near the BYSP Area entrance on the south side of West 16th Street, and an approximately 600-square-foot storage building located between the Engineering Building and Shop.

Primary vehicular access to the BYSP Area is from West 16th Street, which runs northeast to southwest from the adjacent Barber Neighborhood into the BYSP Area. This road served as the former factory entrance road and the on-site portion is lined with large palm trees (Exhibit 3.1-1b). A small cluster of large palm trees is located near the end of the 16th Street extension, and areas of former nut-tree orchards are evident within the BYSP Area. These areas are located north, west, and south of the warehouse, along the =BYSP Area's eastern border south of West 16th Street, and in the southern corner of the BYSP Area, bounded by Estes Road and the decommissioned UPRR spur. Site landscaping and orchards have not been maintained for at least two decades, and many on-site trees have died due to prolonged neglect and lack of water. Weedy vegetation, aged orchards, and various trees persist throughout the BYSP Area. But as detailed further below, a large number of healthy trees of a variety of species remain in the BYSP Area.

An arborist survey performed by McMillan Tree Service and Adema Environmental in April 2023 and updated as of January 2024 identified the location, species, and health of every tree within the BYSP Area with a diameter at breast height (DBH) of 6 inches or greater at the time of the survey (Appendix D). The Arborist Survey Report identified 773 trees with a DBH of 6 inches or greater within the BYSP Area and Off-site Improvement Area. Species identified within the BYSP Area include Valley Oak, Black Walnut, California Fan Palm, Mexican Fan Palm, Canary Island Date Palm, American Sycamore, Chinese hackberry, Chinese Pistache, Pecan, Almond, Tree of Heaven, Weeping Pine, coastal redwood, and blue elderberry.

Photograph 1: Aerial overhead view of the project site.

Photograph 2: Aerial view of southern portion of project site from northeast.

Source: FirstCarbon Solutions, 2024.

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Exhibit 3.1-1a
Existing Conditions Site Photos

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Photograph 3: View of project site entrance on 16th Street looking west.

Photograph 4: View of project site from 22nd Street looking west.

Source: FirstCarbon Solutions, 2023.

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Exhibit 3.1-1b
Existing Conditions Site Photos

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Photograph 5: View of project site looking south from Ivy Street.

Photograph 6: View of project site from 14th street looking west.

Source: FirstCarbon Solutions, 2023.

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Exhibit 3.1-1c
Existing Conditions Site Photos

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The off-site improvement area is largely cleared and undeveloped, within areas of a former almond orchard. The southern half of the off-site improvement area contain an orchard which would be crossed by an underground storm drain line leading to a new outfall on Comanche Creek (as described further below and in Chapter 2, Project Description). Multiple residences are located immediately adjacent to the off-site improvement area along Estes Road.

Surrounding Land Uses

As discussed in Chapter 2, Project Description, of this Draft EIR, the approximately 133-acre BYSP Area is located in the southwestern portion of Chico. It is bounded by various individual properties to the northwest, Chestnut Street and Normal Avenue to the northeast, Estes Road to the east, and UPRR to the southwest. To the south, the BYSP Area is bounded by a portion of unincorporated Butte County, including a decommissioned UPRR spur. Agricultural and rural residential areas lie to the south and west across the UPRR. Existing residential development within the Barber Neighborhood is located to the north and east of the BYSP Area.

The off-site improvement area is bounded by a Pacific Gas and Electric Company (PG&E) parcel to the north (beyond which is the UPRR spur), rural residences and agricultural land to the east, agricultural land and Comanche Creek to the south, and the UPRR as well as more rural residential and agricultural land uses to the west.

Views from the Project Site

Short-range views from the project site include views of single-family residential housing, telephone poles, and vehicles looking north and east from the project site. Medium and long-range views include similar development and features, however they are mostly contained to roadways, as the City's tree canopy obscures the preponderance of views beyond a near-medium distance.

Short- and medium-range views to the south from Estes Road include fencing and agricultural land, as well as interspersed residences. Long-range views show more tree canopy cover in the unincorporated County, with a large and prominent view of the open sky.

Short-range views to the west include the UPRR tracks, rail spur, and associated chain-link fencing. Medium- and long-range views are predominantly obscured by orchard trees planted on the adjacent site, with trees dominating views of the sky.

Views of the Project Site

Views of the project site from all sides are predominantly obscured by surrounding tree cover. From the north and east, roadways leading to dead ends abutting to the project site reveal various trees, fencing, and intervening private residences that block views of the project site almost entirely. Several dead ends show gated entrances and open space with palm and deciduous trees, however the level of visibility is highly variable. From the south on Estes Road, two rows of trees and the UPRR tracks make the project site similarly difficult to see. Breaks in the tree line show interspersed trees, grasses, and open space, however the breaks are small and relatively scarce. Views are similar from the west as well, with breaks from the UPRR tracks offering glimpses into the project site but

also varying highly. Note that public views of the project site from the west are significantly limited due the lack of roads or other publicly accessible locations to the west.

Light and Glare

Nighttime lighting is necessary to provide and maintain a safe and secure environment. Light that falls beyond the intended area of illumination is referred to as "light trespass." Types of light trespass include spillover light and glare. Spillover light, which is light that illuminates surfaces beyond the intended area, is typically caused by artificial lighting sources, such as from building security lighting, signs, parking lot lights, roadway lights, and stadium lights on playing fields. Spillover light can adversely affect light-sensitive uses (e.g., adjacent residences), by creating unwanted illumination.

Glare can result from sunlight or from artificial light reflecting off building exteriors, such as glass windows, metal roofs or other highly reflective surface materials. Squinting or turning away from a light source is an indication of glare. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, sports field lighting, and streetlights. The primary source of mobile nighttime light is headlights of motor vehicles.[2]

City of Chico

Lighting conditions within the City consist of typical urban lighting such as roadway lighting, lighting within and on the exterior of residential and commercial buildings, and headlights from motor vehicles. In contrast, the agricultural and rural uses surrounding the City produce very low ambient nighttime lighting and illumination.

Project Site

The BYSP Area currently contains minimal lighting, restricted to that associated with the existing operational warehouse and various security lighting locations. On-site traffic is primarily limited to daytime operations of the existing RV storage facility (that is housed within the warehouse) and therefore mobile sources of on-site lighting are limited. The BYSP Area does not contain any significant reflective surfaces that contribute to daytime glare. Similarly, the off-site improvement area and Stormwater Alignment Option Area contains minimal lighting and no reflective sources given that it is largely cleared and undeveloped, within areas of an existing and former orchard.

3.1.3 - Regulatory Framework

State

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the State Scenic Highway Program detailed in Streets and Highway Code Section 260. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

[2] City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report, 4.13 Visual Resources and Aesthetics. September.

There are no highways or roads within the City eligible for inclusion in the State Scenic Highway Program.[3]

Nighttime Sky—Title 24 Outdoor Lighting Standards

Title 24 of the California Building Efficiency Standards includes requirements for outdoor lighting for residential and nonresidential development to help to reduce the impacts of light pollution, light trespass, and glare. The standards include lighting characteristics regulations such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off.

Local

City of Chico

General Plan

The General Plan establishes the following goals and policies relevant to aesthetics, light, and glare:

Goal CD-1 Strengthen Chico's image and sense of place by reinforcing the desired form and character of the community.

Policy CD-1.1 **(Natural Features and Cultural Resources)**–Reinforce the City's positive and distinctive image by recognizing and enhancing the natural features of the City and protecting cultural and historic resources.

Action CD-1.1.1 **(Highlight Features and Resources)**–Incorporate and highlight natural features such as scenic vistas, creeks, and trees, as well as cultural resources such as rock walls, into project design.

Action CD-1.1.2 **(Landscape Improvement)**–Emphasize landscaping as a fundamental design component, retaining mature landscaping when appropriate, to reinforce a sense of the natural environment and to maintain an established appearance.

Goal CD-2 Enhance edges and corridors that represent physical boundaries, transitions, and connections throughout the community.

Policy CD-2.1 **(Walkable Grid and Creek Access)**: Reinforce a walkable grid street layout and provide linkages to creeks and other open spaces.

Policy CD-2.3 **(Corridor Improvements):** Improve corridors traversing the City to enhance their aesthetics and accessibility.

Goal CD-3 Ensure project design that reinforces a sense of place with context sensitive elements and a human scale.

[3] California Department of Transportation (Caltrans). 2024. California State Scenic Highway Mapping System. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed December 11, 2024.

Policy CD-3.1 **(Lasting Design and Materials):** Promote architectural design that exhibits timeless character and is constructed with high quality materials.

Goal CD-4 Maintain and enhance the character of Chico's diverse neighborhoods.

Policy CD-4.1 **(Distinctive Character):** Reinforce the distinctive character of neighborhoods with design elements reflected in the streetscape, landmarks, public art, and natural amenities.

Action CD-4.1.1 **(Neighborhood Design Details):** Develop and implement neighborhood plans that identify design qualities and elements for specific areas.

Goal CD-5 Support infill and redevelopment compatible with the surrounding neighborhood.

Policy CD-5.1 **(Compatible Infill Development):** Ensure that new development and redevelopment reinforces the desirable elements of its neighborhood including architectural scale, style, and setback patterns.

Policy OS-1.3 **(Light Pollution):** Reduce excessive nighttime light and glare.

Action S-5.5.1 **(Crime Deterring Design):** Consider the incorporation of design features such as strategic window placement, lighting techniques, and landscaping into development projects to discourage criminal activity.

Municipal Code

The Municipal Code contains several provisions that are relevant to aesthetics, light, and glare:

Chapter 19.18 **(Site Design and Architectural Review):** All new commercial and multi-family residential development is subject to design review. Projects defined or determined to be "major" require review by the City's Architectural Review and Historic Preservation Board (ARHPB), and "minor" projects are handled administratively by the Community Development Director or designee. The City's Design Guidelines Manual provides site design, architecture, exterior lighting, and signage guidance and is intended to ensure that new development maintains a quality appearance over time.

Chapter 19.60.50 **(Exterior Lighting):** Exterior lighting shall be architecturally integrated with the character of all structures, energy-efficient, and shielded or recessed so that direct glare and reflections are confined, to the maximum extent feasible, within the boundaries of the site. Exterior lighting shall be directed downward and away from adjacent properties and public right-of-way. Shielded shall mean that the light rays are directed onto the site and the light source, whether bulb or tube, is not visible from an adjacent property. All parking and security lighting shall consist of full cutoff fixtures unless a different cutoff classification is specifically authorized through the architectural review process. This section does not apply to sign illumination, traffic safety lighting, or public street lighting. No

permanently installed lighting shall blink, flash, or be of unusually high intensity or brightness. All lighting fixtures shall be appropriate in scale, intensity, and height to the use they are serving.

Design Guidelines Manual

The City of Chico Design Guidelines Manual serves to guide the aesthetic qualities of development in Chico and maintain its visual character by integrating architectural and landscape design with the natural beauty of its surrounding environment. The recommended design practices in the Design Guidelines Manual are non-binding and applicants may propose alternate solutions not identified in the Manual.

3.1.4 - Methodology

The value attached to changes in visual character is largely subjective. For this Draft EIR, the determination of when changes to the visual environment become a substantial adverse effect is based on the following primary factors: (a) the existing scenic quality of an area; (b) the level of viewer exposure and concern regarding visual change; and (c) the level of actual visual change caused by the project as seen by a given viewer group. The overall visual sensitivity is first established based on existing visual quality, viewer exposure, and viewer concern. These factors are then considered together with the level of expected visual change or contrast and significance. Visual change is an overall measure of the alteration or change in basic visual attributes such as form, line, color, and texture as a result of the subject project. Thus, a substantial adverse effect can occur when a project results in high levels of visual change or quality of public views from publicly accessible areas.

Except in limited circumstances not relevant here where formally adopted agency regulations expressly protect private views, a project's impacts to private views are not required to be evaluated under the California Environmental Quality Act (CEQA) (*See, e.g., Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477). The most recent update to the CEQA Guidelines also clarifies that public views "are those that are experienced from a publicly accessible vantage point." (CEQA Guidelines Appendix G).

FCS evaluated aesthetics, light, and glare impacts through review of the BYSP (in terms of the regulations, development standards, guidelines and policies that would govern the proposed project and thus are treated as project design features for purposes of this analysis), site reconnaissance, and review of applicable provisions of the General Plan, Municipal Code, and the City of Chico Design Guidelines Manual.

Per CEQA Guidelines Section 21071, an urbanized area includes an incorporated city that has a population of at least 100,000 persons. The BYSP Area, where residential, commercial, and recreational development would occur, is located within the City of Chico, which is consistent with this definition of an urbanized area, in that it had a population of 109,589 as of January 1, 2024.[4]

[4] California Department of Finance (DOF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 16, 2024

Because of the BYSP Area is located in an urbanized area for purposes of CEQA, this impact analysis evaluates the proposed project's consistency with zoning and other regulations governing scenic quality. In addition, for informational purposes and to further facilitate full disclosure, because the BYSP Area is located at the City's urban edge and given the location of certain off-site improvements within the unincorporated County, there is also a discussion of potential changes to the existing visual character and quality of public views.

3.1.5 - Thresholds of Significance

The City, as Lead Agency in its discretion, has elected to utilize the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to aesthetics, light and glare are significant environmental effects.

> Except as provided in Public Resources Code Section 21099 (d)(1), would the proposed project:
>
> a) Have a substantial adverse effect on a scenic vista?
>
> b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a State Scenic Highway? (Refer to Chapter 4, Effects Found not to be Significant).
>
> c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
>
> d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and operation of the proposed project and provides feasible mitigation measures where appropriate.

Scenic Vistas

Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista.

Impact Analysis

A scenic vista is generally defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. A significant impact would occur if the proposed project had a substantial adverse effect on a scenic vista as defined and identified in the City's General Plan.

According to the General Plan EIR, scenic vistas include views of the transition between landscapes (Sierra Nevada foothills to the east and the Central Valley to the west), the agricultural landscape,

and the foothills and rising elevations to the east of the City, the major creeks, Bidwell Park, and views of City neighborhoods.[5]

The project site is fenced and not publicly accessible and therefore does not provide access to publicly available scenic vistas. The project site is more than one mile from Lower Bidwell Park. The Comanche Creek Greenway, the nearest open space to the project site, is located approximately 0.3 mile to the east of the project site. Views of these areas to and from the project site are either nonexistent due to distance (Bidwell Park) or limited due to intervening development and vegetation (Comanche Creek Greenway). Neither Bidwell Park nor the Comanche Creek Greenway are readily visible from the project site. Views of City adjacent neighborhoods from the project site are intermittently obstructed consisting mostly of existing vegetation and fencing.

The project site is located on the western edge of the City; therefore views of the foothills of the Sierra Nevada mountain range to the east are significantly limited by intervening development and vegetation. Similarly, views of Big Chico Creek, Little Chico Creek, and other creeks in the Chico area are not visible to or from the project site due to distance and intervening development. Views of the project site from Comanche Creek are limited by existing orchard vegetation, a railroad spur, and distance.

The project site is located at a transition between urban land uses in the City of Chico and agricultural land uses in adjacent unincorporated Butte County; however, views of this transition are limited to private residences in the immediate vicinity and limited traffic on Estes Road. Views from the project site are limited primarily to rear yards of adjacent residential areas to the north and east and agricultural land uses to the west and south. No other views of scenic vistas are visible from the project site.

As indicated in the General Plan EIR, the City of Chico has many distinct and unique neighborhoods that help to define the urban form and character of the City, most notably in older neighborhood areas such as the Barber Neighborhood, adjacent to the project site. Views from the adjacent Barber Neighborhood would change along the perimeter, over time, to include the proposed project. However, as noted, this area is not considered a scenic vista. Moreover, development of the proposed project was envisioned in the General Plan, and in accordance with General Plan Policy LU-3.1, the proposed project has been designed to be complementary and consistent with the surrounding neighborhoods, including the incorporation of buffers and transition areas, and entry points.

The proposed project would introduce new residential, commercial, recreational, and open space uses within the BYSP Area, as well as stormwater infrastructure in the adjoining off-site improvement area/Stormwater Alignment Area. Development would be required to comply with the applicable BYSP development criteria, as well as applicable provisions of the City of Chico General Plan, and would be subject to the City's design review processes. The proposed project would not obstruct or interfere with scenic vistas because the proposed project is located in an area where scenic resources are limited and not visible due to distance, topography, and/or intervening development.

[5] City of Chico 2010. General Plan Update Draft Environmental Impact Report. 4.13 Visual Resources and Aesthetics. September.

Therefore, the proposed project would not have a substantial adverse effect on a scenic vista and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Visual Character

Impact AES-2: The proposed project would not conflict with applicable urban zoning and other regulations governing scenic quality.

Impact Analysis

Per CEQA Guidelines Section 21071, an urbanized area includes an incorporated city that has a population of at least 100,000 persons. The BYSP Area, where residential, commercial, and recreational development would occur, is located within the City of Chico, which is consistent with this definition of an urbanized area, in that it had a population of 109,589 as of January 1, 2024.[6] Because of the BYSP Area is located in an urbanized area for purposes of CEQA, this impact analysis evaluates the proposed project's consistency with zoning and other regulations governing scenic quality. In addition, for informational purposes and to further facilitate full disclosure, because the BYSP Area is located at the City's urban edge and given the location of certain off-site improvements within the unincorporated County, there is also a discussion of potential changes to the existing visual character and quality of public views.

The proposed project would be consistent with applicable urban zoning and other regulations governing scenic quality as applicable to the project site. For example, the proposed project would be consistent with General Plan Goal CD-4 and Action CD-4.1.1 to maintain and enhance the character and quality of the adjacent Barber Neighborhood while also developing and implementing a neighborhood plan throughout the BYSP Area. The proposed project would also be consistent with Goal CD-5 and Policy CD-6.1, in that it would redevelop an area and be compatible with surrounding areas. Commercial and multi-family development within the BYSP Area would be subject to Chapter 19.18, Site Design and Architectural Review and well as Chapter 19.60.50 regarding exterior lighting. The proposed project's consistency with these regulations would ensure consistency with scenic quality. Furthermore, because the proposed project would be required to comply with the BYSP, which includes further design criteria and development standards, it would be consistent therewith and therefore, it would have a less than significant impact.

[6] California Department of Finance (DOF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2022. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 16, 2024.

As previously discussed, the BYSP Area is largely vacant with the exception of three existing structures that have been planned for potential adaptation for reuse and incorporated into the development of the proposed project. From publicly accessible vantage points such as dead-end roadways to north and east abutting the project site, the overall visual quality consists primarily of tree cover, fencing and intervening private residences that block views of the project site almost entirely. Several dead ends show gated entrances and open space with palm and deciduous trees, however the level of visibility is highly variable. From the south on Estes Road, two rows of trees and the UPRR tracks make the project site similarly difficult to see. However, breaks in the tree line show interspersed trees, grasses, and open space, however the breaks are small and relatively scarce. Views are similar from the west as well, with breaks from the UPRR tracks offering glimpses into the project site but also varying highly. Note that public views from the west are significantly limited. Sensitivity of views from these public vantage points would be low because views of the project site are largely obscured.

The BYSP objectives that would apply to the proposed project upon the City's adoption of the BYSP include, among others, developing the BYSP Area as an extension of the existing Barber Neighborhood aesthetic. As such, buildings are envisioned to have contextual architectural features and link to the surrounding neighborhood's character. Residential development within the BYSP Area would implement architectural styles that reflect the most prevalent styles in the surrounding Barber Neighborhood, including Craftsman, Farmhouse Victorian, Spanish Revival, European Romantic, and Colonial Revival. Residential lots with rear loading (garage in the back) would have alley access, much like that of residences throughout the Barber Neighborhood. The proposed project seeks to emphasize the BYSP Area's history by incorporating existing structures and maintaining the historic industrial aesthetic of the BYSP Area into new development. For example, the existing palm trees within the BYSP Area along the 16th Street extension would be retained, as feasible. Street and pedestrian lighting and site furnishings such as benches, trash cans and bicycle racks, and the overall streetscape have been designed based on applicable City and BYSP standards, guidelines, and recommendations and would be required to follow the overall BYSP design style to create a cohesive and aesthetically pleasing neighborhood character. At full buildout, a variety of potential future park, recreational, and open space amenities are contemplated by the BYSP (see BYSP Chapter 4, Parks & Amenities and Figure 4.1, Parks, Open Space, and Community Amenities Plan). The open space network within the BYSP is designed to provide, at full buildout, opportunities for a wide array of active and passive recreation uses to help meet the range of needs within the proposed project and broader community, and would also serve as aesthetic features enhancing the visual quality of the BYSP Area and vicinity, consistent with applicable City and Chico Area Recreation District parkland standards.

Specifically, and as detailed more fully in the BYSP, at full buildout, a variety of potential future park, recreational, and open space amenities are contemplated by the BYSP including the Barber Pop-up, Social Hub, Diamond at Barber Yard, Athletics Facility, Dog Park, Picnic Grove, Ruins Park, and various neighborhood parks (e.g., the Yard).

Additionally, the BYSP proposes to include a landscape buffer along the northern and western edges of the BYSP Area where it abuts existing residential development in the Barber Neighborhood (see BYSP Section 4.3.3, Neighborhood Edge). Where the potential Athletic Facility parking lot abuts the

Barber Neighborhood, a landscape buffer and a solid wall would help to obscure views of the parking lot from publicly accessible areas within the Barber Neighborhood. For other areas on the northern and western BYSP Area boundary, a minimum buffer of 20 feet would be implemented with the intention of creating a seamless extension of the Barber Neighborhood into the BYSP Area. Existing mature trees within this buffer area would remain as part of the proposed project, to the extent feasible.

With respect to the Off-site Improvement Area and the Stormwater Alignment Option Areas, visual changes would be primarily limited to temporary construction activities. Upon completion, the underground drainage alignment would not be visible and the detention basin would be visually consistent with the surrounding agricultural lands consisting of drainage appurtenances and managed vegetation. Furthermore, public views of the Off-site Improvement Area and Stormwater Alignment Area are significantly limited, if not nonexistent based on their location set back from Estes Road and bordered by the adjacent UPRR tracks.

During construction, the appearance of the project site would vary depending on the construction activities underway and equipment being used at that time. During site preparation, areas would be cleared and graded. However, the visual changes would be similar to those commonly observed on construction sites in urbanized areas and would be generally limited to those portion(s) of the project site, according to the ultimate project phasing. Furthermore, construction equipment staging areas would utilize appropriate screening as well. As such, construction within the BYSP Area and other portions of the project site would temporarily affect the visual character or quality of the project site from publicly accessible vantage points; however, the maintenance of mature trees along the project perimeter and the inclusion of buffer areas and walls, in accordance with applicable General Plan, Municipal Code and BYSP policies, requirements, and guidelines would help to ensure the resulting development has a high quality design aesthetic that is compatible with other nearby developments. Furthermore, as previously discussed, upon completion, the stormwater basin would be visually consistent with existing surrounding agricultural areas consisting of open space and agricultural lands.

Development within the BYSP Area would be required to follow the City's and BYSP's design standards. Design guidance in the BYSP encourages compatible site layouts and architectural styles throughout the project to create a cohesive neighborhood character that acts as an extension of the existing neighborhood surrounding the BYSP Area. As such, the proposed project would not be aesthetically incompatible with existing development to the north and east of the BYSP Area. Although rural agricultural lands exist west and south of the BYSP Area, development of the BYSP Area is long-planned for and expected within the City's General Plan. Therefore, development of the project site from vacant land to built-up land would not be incompatible with the surrounding agricultural aesthetic. The proposed project would be a visual improvement from the existing conditions of the site, which is characterized by a vacant lot and remnants of the Diamond Match Factory, asphalt and paving, and landscaping that has not been maintained for at least two decades.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Light and Glare

Impact AES-3: The proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact Analysis

As previously discussed, the BYSP Area in its existing state is mostly vacant, with the exception of some remnant structures from the Diamond Mach Company, and warehouse space which is currently leased for RV storage. Lighting on-site is restricted to that associated with the existing warehouse and various security lighting locations throughout the BYSP Area. On-site traffic is primarily limited to daytime operations of the RV storage facility and therefore mobile sources of on-site lighting are limited. The BYSP Area does not contain any significant reflective surfaces that contribute to daytime glare. With respect to the Off-site Improvement Area and the Stormwater Alignment Area, there is no lighting on this portion of the project site; and as discussed in Chapter 2, Project Description, any exterior lighting would be designed consistent with applicable standards and guidelines.

Light and glare impacts related to construction would be temporary in nature and consist of some amount of morning and evening vehicle and equipment lighting that would occur only during approved construction hours, minimal nighttime lighting for security purposes, and occasional glare from vehicle and equipment windshields. This would not be different in kind or amount as seen in the vicinity of the BYSP Area; construction in such areas would likely require similar lighting. Moreover, lighting would be required to meet all applicable City standards and guidelines, including those that restrict construction hours and apply to exterior lighting, such as Chapter 19.60.50. With respect to the construction-related impacts in the Off-site Improvement Area and Stormwater Alignment Option Areas, potential light and glare impacts during construction would be the same or less than the impacts discussed above for the other components of the proposed project. As such, construction of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

The proposed project consists of the full buildout of the BYSP, including off-site improvements. When completed, the proposed project could include a maximum of 1,250 dwelling units, and a total of approximately 210,000 square feet of commercial space and related improvements and infrastructure to serve the proposed project. Housing density within the BYSP Area would range from 4 to 35 units per gross acre. At full buildout, a variety of potential future park, recreational, and open space amenities are contemplated by the BYSP including the Barber Pop-up, Social Hub, Diamond at Barber Yard, Athletics Facility, Dog Park, Picnic Grove, Ruins Park, and various neighborhood parks (e.g., the Yard). As detailed in Impact AES-1, three existing structures in the BYSP Area (the Engineering Building, Shop, and warehouse) have the potential to be adapted for

reuse. As such, planned residential, commercial, and recreational development in the BYSP Area would increase the amount of light from streetlights, interior and exterior lighting from buildings and facilities, and vehicle headlights.

Land uses surrounding the BYSP Area include "Medium Density Residential" and "Medium-High Density Residential" to the northwest, "Low Density Residential" to the north and east, and "Manufacturing & Warehousing" to the southeast. Land directly south and west of the BYSP Area is outside of the City's sphere of influence, within the jurisdiction of Butte County, and has a land use designation of Agriculture (AG). As such, many areas directly adjacent to the BYSP Area contain sources of light and glare due to the urban residential and rural residential settings.

During operation, the proposed project would introduce new sources of light and glare to the site, including interior and exterior building lights, lights associated with open spaces and athletic facilities, vehicle headlights, and reflective surfaces such as windows or metal surfaces. Views into the project site at night would be altered by these sources of artificial light. As discussed in Chapter 2, Project Description, final design for individual developments would be in accordance with the relevant provisions of the BYSP and Barber Yard Development Agreement, including interior and exterior lighting. Additionally, all lighting would be designed consistent with City standards and guidelines for interior and exterior lighting. (As noted above, during project construction there may also be overhead lights provided for security and other nominal, temporary sources of light and glare that could alter current views of the BYSP Area.) Within the Off-site Improvement Area and the Stormwater Alignment Option Areas, once the proposed improvements would be installed, there would be minimal, if any, introduction of light and glare.

Operation of the proposed project would therefore result in a considerable increase in the amount of light and glare in the BYSP Area, which could potentially result in an increase in light spillover to adjacent areas and glare. The BYSP includes guidelines for lighting, which would be adhered to during operation of the proposed project and, as indicated in BYSP Section 4.4, Lighting and Furnishings, would be consistent with applicable City standards and guidelines. The proposed project would be required to comply with the applicable lighting standards in the Municipal Code Chapter 19.18 (Site Design and Architectural Review) and Chapter 19.60.50, which stipulate that exterior lighting shall be shielded or recessed so that direct glare and reflections are confined and directed downward and away from adjacent properties. Shielded light is defined by the Municipal Code as light rays that are directed onto the site and not visible from an adjacent property. In addition, the California Green Building Standards Code (CALGreen) establishes limits for the quantities of lighting that can be emitted based upon building components, to which the proposed project would be required to comply. In terms of glare, the proposed project would follow approved design guidelines and, therefore, would not contain lighting or materials that would create a significant glare, particularly along Ivy Street.

Although the proposed project would result in new light and glare sources, they are not expected to adversely affect day or nighttime views, as lighting and materials would be designed to comply with applicable City and other development standards and guidelines, which would further reduce impacts in this regard. For these reasons, project impacts related to light and glare impacts during operation would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.1.7 - Cumulative Impacts

The geographic scope of the cumulative aesthetics impact analysis is the publicly available viewshed surrounding the BYSP Area, including areas within the City of Chico and unincorporated Butte County. The cumulative aesthetics, light and glare analysis uses the project list approach for purposes of identifying reasonably foreseeable future projects because such impacts are fairly localized. Of the seven projects listed on the Cumulative Projects list in Chapter 3, Environmental Impact Analysis, of this Draft EIR, three are located within 0.5 mile of the BYSP Area: Jamboree Housing at 1297 Park Avenue, Renewal Center at 2216 Fair Street, and Self Storage Ph 3 at 2260 Park Avenue.

This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, would result in a cumulatively significant impact with respect to aesthetics, light and glare. This analysis then considers whether the proposed project's incremental contribution would be considered cumulatively considerable and thus significant for CEQA purposes. Both conditions must apply for cumulative effects to rise to the level of significance.

In general, potential visual impacts to the character of an area account for the immediate surroundings; thus, the analysis of cumulative aesthetic impacts focuses on areas that share a viewshed with the BYSP Area. The BYSP Area is generally bordered by developed residential areas to the north and east, and agricultural and rural residential areas to the south and west. Existing and future development in the cumulative context would include existing residential development and new mixed-use development consistent with the General Plan. Cumulative projects within the City would be required to comply with applicable City General Plan policies and programs and adhere to applicable development standards and design guidelines and zoning in the Municipal Code, and thus to the extent the cumulative projects are considered to be in an urbanized area, impacts would be less than significant in this regard. To the extent cumulative projects are considered to be located in non-urbanized areas, while there would be a change to the existing visual quality as this geographical area transitions from a more rural to a more urbanized setting, all cumulative projects would be mandated to adhere to all applicable standards and requires that address aesthetics, as well as lighting and glare, the alteration of scenic resources and natural features, the alteration of views of scenic resources and natural features. The proposed project is one of the few Special Planning Areas (SPAs) that is proposed under the 2030 General Plan. Therefore, under either applicable CEQA threshold, cumulative impacts with respect to aesthetics or nighttime lighting and daytime glare would be less than significant.

As previously discussed above, there are no designated scenic vistas or State-designated scenic highways in the BYSP Area or other portions of the City. In terms of the proposed project's contribution to this less than significant cumulative impact, given that the BYSP Area's location in an urbanized area, and the proposed project's consistency with applicable urban zoning and other standards and requirements related to scenic quality, its contribution with respect to visual quality is not cumulatively considerable. For those areas treated for purposes of this analysis as non-urbanized, cumulative changes to the visual landscape associated therewith have the potential to result in an alteration of the existing visual character of the area, but they are not located in or near the foothills or near other scenic resources. Furthermore, the proposed project and cumulative development would be subject to specific regulations and guidelines related to building heights, setbacks, undergrounding of utilities, landscaping, signage, and permitted land uses, and would be reviewed in accordance with applicable City provisions, such as, for example Chapter 19.18 of the Municipal Code, all of which would help to ensure general compatibility with other developments in the vicinity and high quality of design and site planning. Additionally, the proposed project's contribution to light and glare is also expected to generate new sources of light and glare. However, the proposed project would be required to comply with the lighting standards in the Municipal Code Chapter 19.18 and Chapter 19.60.50, which stipulates that exterior lighting shall be shielded and directed downward so that light rays that are directed onto the site and not visible from an adjacent property. Furthermore, the BYSP sets forth additional standards and guidance for both light and glare for street and pedestrian lighting, which would further reduce impacts in this regard. Although the proposed project would result in new light and glare sources, they are not expected to be substantial such that they would adversely affect day or nighttime views, as lighting and materials would be designed to comply with applicable City and other development standards and design guidelines. Therefore, the proposed project would not result have a cumulatively considerable contribution to this already less than significant cumulative impact.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

3.2 - Agriculture and Forestry Resources

3.2.1 - Introduction

This section describes the existing agriculture and forestry resources in the project site and vicinity, as well as the relevant regulatory framework. This section also evaluates the potential impacts related to agricultural and forest resources that could result from implementation of the proposed project. Descriptions and analysis in this section are based, in part, upon existing site conditions, the Chico 2030 General Plan (General Plan), the Butte County General Plan, the Land Evaluation and Site Assessment (LESA) Model prepared by FirstCarbon Solutions (FCS) (Appendix B), the California Department of Conservation materials, aerial photographs, topographical maps, and street maps.

The following public comments were received during the Notice of Preparation (NOP) scoping period related to Agriculture and Forestry Resources:

- Consider how the proposed off-site stormwater improvements located in unincorporated Butte County would be consistent with the existing County Agricultural zoning.
- Analyze whether the proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.
- Butte County should be listed in the Environmental Impact Report (EIR) as a responsible agency regarding any entitlements required for development in the AG-40 zone within County jurisdiction.
- Generalized concerns about development of rural farmland.

3.2.2 - Environmental Setting

City of Chico and Surrounding Areas

According to the City's General Plan Draft Environmental Impact Report (General Plan EIR), outside the boundaries of the Chico Sphere of Influence (SOI), within unincorporated Butte County, the existing land uses are primarily agricultural and rural residential. Lands northeast and east of the SOI are used primarily for seasonal grazing of livestock. The area north of the SOI, east of State Route (SR) 99, and south of Rock Creek is developed with rural residential land uses interspersed with orchards, field crops, and grazing land. The Greenline established by Butte County provides a boundary between urban and agricultural uses to the west.[1] Within the City's municipal boundary and SOI, the primary use of land is developed urban and suburban uses; however, there are some agricultural or agricultural-supporting land uses. The largest active agricultural land use within the City's municipal boundary is the Vanella Orchard located on West 8th Avenue. Also located within the central urban area is the Chico Nut Company, adjacent to the Esplanade and immediately south of Lindo Channel. Two large agricultural industrial operations, Smucker Quality Beverages and the

[1] The Greenline in a boundary established in 1982 by Butte County Board of Supervisors and the City to separate the City's urban area and development from the prime agricultural soils to the west. The boundaries of the Greenline are reviewed every five years by the Butte County Board of Supervisors.

R.W. Knudsen Company, are located to the south of the southern City limit but are within the SOI. Within the City, various small agriculture operations and remnant orchards exist as isolated uses on undeveloped lands.[2] While the City's General Plan includes a variety of land use designations, there is no land use designation that only allows for agriculture uses.

According to the General Plan EIR, within the Chico Planning Area, which extends beyond the City's SOI west to the Sacramento River and east into the Sierra Nevada foothills, agricultural land accounts for approximately 74,508 acres, of which 6,520 acres fall within the current City limits. The Farmland Mapping and Monitoring Program (FMMP) administered by the California Department of Conservation maps out agricultural areas based on soil quality and land use, with categories such as "Prime Farmland," "Farmland of Statewide Importance," and "Grazing Lands." According to the FMMP maps, the entire Chico Planning Area includes approximately 30,231 acres of Prime Farmland, along with approximately 1,389 acres of Farmland of Statewide Importance and Unique Farmland. There are no lands under Williamson Act Contracts within the city limits and SOI; however, a large portion of the land surrounding the City in unincorporated Butte County is held protected as Prime Agricultural Land or under Williamson Act Contracts.[3]

Timber Land and Forest Land

Pursuant to California Public Resources Code Section 4526, timberland is defined as " . . . land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees…" Timberland zoned as Timberland Production, as defined by California Government Code Section 51104(g) is an area " . . . devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses . . . ." As mapped by the United States Department of Agriculture Forest Service, there are no National Forest lands within the City.[4]

Project Site

Barber Yard Specific Plan Area

The Diamond Match Company began constructing worker's housing between 1904 and 1906 within the Barber Yard Specific Plan (BYSP) Area. At its peak, this company community boasted orchards, shops, a swimming pool, a social hall, and other amenities for residents. Historical aerial maps show evidence of orchards present on the BYSP Area periodically since at least 1941.[5]

Currently (as discussed in Chapter 2, Project Description, of this Draft EIR), the BYSP Area is largely vacant, with the exception of an RV storage facility that is currently leasing the existing Warehouse building in the northern portion of the BYSP Area. Project site soil is highly disturbed due to past industrial uses.

[2] City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report, Section 4.2 Agricultural Resources. September.
[3] Ibid.
[4] United States Department of Agriculture (USDA). 2024. Forest Service Forests and Grasslands. Find a Forest. Website: https://www.fs.usda.gov/visit/find-forest. Accessed December 9, 2024.
[5] Cameron-Cole. 2022. Phase I Environmental Site Assessment. October.

The BYSP Area is zoned Special Planning Area (SPA) by the Chico Zoning Ordinance and the City's General Plan designates the BYSP Area specifically as "SPA-2–Barber Yard." The SPA land use designation identifies areas for significant new growth that require subsequent comprehensive planning and are to be developed as connected and complete neighborhoods with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. The General Plan Land Use Diagram (Figure LU-1 of the 2030 General Plan Land Use Element) conceptually identifies a mix of desired land uses within the SPA-2–Barber Yard, including "Low Density Residential," "Medium Density Residential," "Medium-High Density Residential," "High Density Residential," "Residential Mixed Use," "Office Mixed Use," "Industrial/Office Mixed Use," and "Secondary Open Space."

According to the United States Department of Agriculture (USDA) Web Soil Survey (WSS), the surface soils within the BYSP Area are mapped as "Chico Loam" and are can be considered "Prime Farmland when irrigated," which applies to properties that have been under irrigation in the past 4 years. Note that the BYSP Area is not currently irrigated, and it is unknown when irrigation last occurred.

The California Department of Conservation FMMP Important Farmland Finder classifies the BYSP Area as "Other Land."[6] This classification is applied to lands not included in any other mapping category; low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is also mapped as Other Land.

The BYSP Area is not under an active Williamson Act Contract.[7,8]

Off-site Improvement Area

Historic aerials show evidence of orchards on the off-site improvement area no earlier than 1941 with evidence of agricultural uses until at least 2018. In its exising state, the off-site improvement area is largely cleared and undeveloped.

The off-site improvement area is located within unincorporated Butte County and has a County General Plan land use designation of Agriculture (AG) and is zoned under the Butte County Code as AG-40. It is located outside of the City's SOI but within the City's Planning Area. According to the USDA WSS, the off-site improvement area surface soils are mapped as "Chico Loam" with a farmland classification of "Prime Farmland when irrigated" (Exhibit 3.2-1 and Exhibit 3.2-2).

[6] California Department of Conservation. 2022. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 9, 2024.

[7] Butte County. 2015. Butte County California Williamson Act Parcels 2015/2016. Website: https://www.buttecounty.net/DocumentCenter/View/2890/View-Map-of-All-Williamson-Act-Parcels-in-the-County-PDF?bidId=. December 9, 2024.

[8] California Department of Conservation. 2024. California Williamson Act Enrollment Finder. Website: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. Accessed December 9, 2024.

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Source: Bing Aerial Imagery. California Department of Conservation, Farmland Mapping and Data.

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Exhibit 3.2-1
Important Farmland Map

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CITY OF CHICO
BARBER YARD SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

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Source: Bing Aerial Imagery. USDA Web Soil Survey, Butte County Soils. California Department of Conservation, Farmland Mapping and Data.

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Exhibit 3.2-2
Soils Map

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As shown in Figure AG-1 of the Butte County General Plan 2030, the majority of the County's farmland is classified as Prime Farmland and Grazing Land. The FMMP Important Farmland Finder lists the off-site improvement area as "Prime Farmland." Prime Farmland is defined as irrigated land with the best combindation of physical and chemical features able to sustain long-term production of agricultural crops. Futhermore, land designated Prime Farmland must have been used for production of irrigated crops at some time during the 4 years prior to the FMMP mapping date.[9]

As of 2007, approximately 216,000 acres were enrolled in Williamson Act Contracts, constituting 33 percent of the County's agricultural land. As of 2024, the off-site improvement area is not under an active Williamson Act Contract.[10]

Stormwater Alignment Option Areas

The Stormwater Alignment Option Areas are mapped as "Prime Farmland" by the FMMP Important Farmland Finder. As discussed above, Prime Farmland is defined as irrigated land with the best combindation of physical and chemical features able to sustain long-term production of agricultural crops. As of 2024, the Stormwater Alignment Option Areas were not under an active Williamson Act Contract.[11]

3.2.3 - Regulatory Framework

Federal

Farmland Protection Policy Act

The Farmland Protection and Policy Act (FPPA) was designed to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. This Act assures that to the extent possible, federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every 2 years. This Act does not authorize the federal government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners. For the purposes of the Act, "farmland" includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban/built-up land.

State

Farmland Mapping and Monitoring Program

The California Department of Conservation established the FMMP in 1982. The FMMP is a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The maps are updated every 2 years with the use of

[9] California Department of Conservation. 2024. California Williamson Act Enrollment Finder. Website: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. Accessed December 9, 2024.
[10] Ibid.
[11] Ibid.

aerial photographs, a computer mapping system, public review, and field reconnaissance. The program rates agricultural lands according to physical characteristics and other factors such as irrigation status. The best-quality farmland is land that contains a combination of physical and chemical features able to sustain long-term agricultural production and is classified as Prime Farmland. Additional classifications include Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance (Table 3.2-1).

The FMMP also inventories and maps a variety of other land use categories. For purposes of determining a proposed project's significance under the California Environmental Quality Act (CEQA), only Prime Farmland, Unique Farmland, and Farmland of Statewide Importance are used to determine impacts. Conversion to nonagricultural uses of lands falling under any of these classifications is considered a potentially significant impact under CEQA Guidelines.

Table 3.2-1 provides a description of the various farmland classifications from the USDA.

Table 3.2-1: Description of Farmland Classifications

Farmland Category	Description
Prime (P)	Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Statewide Importance (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Unique (U)	Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climate zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
Local (L)	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance, but they are shown separately.
Grazing (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
Urban and Built-Up Land (U)	Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Farmland Category	Description
Other (X)	Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
Water (W)	Perennial water bodies with an extent of at least 40 acres.

California Land Conservation Act

The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the act, landowners agreeing to keep their lands under agricultural production for a minimum of 10 years receive property tax adjustments. Williamson Act Contracts limit the use of the properties to agricultural, open space, and other compatible uses. Williamson Act lands are assessed based on their agricultural value rather than their potential market value under nonagricultural uses. The expiration or termination of a Williamson Act Contract may occur through one of several different mechanisms, including, among others, through cancellation or the initiation of a non-renewal process.

California Public Resources Code

California Public Resource Code Section 4562 defines Forest Land and Timber Land as follows:

Forest Land

Land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Timber Land

Land, other than land owned by the federal government and land designated by the Board of Forestry and Fire Protection (Board) as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the Board on a District basis after consultation with the District committees and others.

Local

Chico 2030 General Plan

The City's General Plan sets forth the following goals, policies, and actions that are relevant to agriculture and forestry resources for purposes of this analysis:

Sustainability Element

Goal SUS-7 Support local food systems in Chico.

Policy SUS-7.1 (Community Food System)–Support a community food system that bolsters the economy, supports local agriculture, promotes healthy lifestyles, and connects Chico residents to local food sources.

Land Use Element

Policy LU-1.2 (Growth Boundaries/Limits)–Maintain long-term boundaries between urban and agricultural uses in the west and between urban uses and the foothills in the east, and limit expansion north and south to produce a compact urban form.

Action LU-1.2.1 (Greenline)–Retain the Greenline.

Policy LU-2.6 (Agricultural Buffers)–Require buffering for new urban uses along the City's Sphere of Influence boundary adjacent to commercial crop production. Landscaping, trails, gardens, solar arrays, and open space uses are permitted within the buffer. Design criteria for buffers are as follows:

- A minimum 100-foot-wide physical separation, which may include roadways, pedestrian/bicycle routes, and creeks, between the agricultural use and any habitable structure.
- Incorporate vegetation, as may be needed, to provide a visual, noise, and air quality buffer.

Open Space and Environment Element

Goal OS-5 Preserve agricultural areas for the production of local food and the maintenance of Chico's rural character.

Policy OS-5.1 (Urban/Rural Boundary)–Protect agriculture by maintaining the Greenline between urban and rural uses.

Policy OS-5.2 (Agricultural Resources)–Minimize conflicts between urban and agricultural uses by requiring buffers or use restrictions.

Action OS-5.2.1 (Agricultural Buffers)–Require buffers for development adjacent to active agricultural operations along the Greenline to reduce incompatibilities, and explore opportunities for public uses within buffers.

Policy OS-5.3 (Support Agriculture)–Support local and regional agriculture.

Policy OS-5.4 (Agricultural Lands)–Promote the continued use of land within the city limits for local food production while working with property owners to minimize impacts to and from agricultural operations.

Goal OS-6 Provide a healthy and robust urban forest.

Policy OS-6.1 (Healthy Urban Forest)–Ensure the continued protection and management of the urban forest to reduce energy demand, increase carbon sequestration, and reduce urban heat gain.

Action OS-6.1.1 (Urban Forest Maintenance)–Maintain and expand the urban forest by:

- Maintaining existing City trees through regular, scheduled service.
- Planting new trees to replace those that require removal and to enhance the street tree canopy, where needed.
- Requiring street and parking lot tree planting in new development.
- Working with commercial parking lot owners to improve the shade canopy.
- Implementing the Municipal Code's tree protection regulations.
- Using volunteer groups and property owners to plant new trees, care for newly planted trees, maintain young trees, and provide information and instructions regarding such care and maintenance.

Action OS-6.1.2 (Utility Impacts)–Where feasible, require new underground utilities that are in close proximity to trees to be designed and installed to minimize impacts to trees through consultation with the Urban Forester.

Butte County General Plan 2040

The County's General Plan sets forth the following goals, policies, and actions that are relevant to agriculture and forestry resources for purposes of this analysis:

Agriculture Element

AG-P2.3 Redesignation and rezoning of land designated as Agriculture to an urban designation shall be allowed only when the applicant can demonstrate that the following criteria are met and mitigated:

a. The lot(s) for which conversion is requested is adjacent to uses other than agriculture or agricultural support uses (e.g., receiving plants, hulling plants).
b. The conversion will not be detrimental to existing agricultural operations.
c. The conversion land is adjacent to existing urban infrastructure and conversion will constitute a logical contiguous extension of a designated urban area.
d. No feasible alternative exists that is less detrimental to agriculture.
e. Full mitigation of impacts to the extent allowed under the law is provided, including, but not limited to, roads, drainage, schools, fire protection, law enforcement, recreation, sewage and lighting.

AG-P2.4 As set forth in the Zoning Ordinance, rezoning agricultural land to agricultural zones with lower parcel size restrictions shall be minimized and allowed only if specific criteria are met.

AG-P2.6 The County shall retain and protect agricultural lands through the use of proactive land use techniques, including, but not limited to, the following: density bonuses,

permitting increased density on developable land in exchange for protection of agricultural land.

AG-P5.1 Agricultural uses shall be the primary uses within the Agriculture land use designation. Residential uses, such as a farmer's home, and habitat mitigation banking uses shall be considered accessory uses.

AG -P5.2 Urban development and habitat mitigation banking uses shall not limit the financial sustainability of agricultural operations.

AG-5.3.1 The Zoning Ordinance shall allow animal grazing and crop cultivation, as defined under the Zoning Ordinance, as an interim use in Residential, Commercial and Industrial zones on parcels of 1-acre or larger in size. The Butte County Right-to-Farm Ordinance (Butte County Code Chapter 35) shall continue to recognize that, while not exclusively devoted to agriculture, Residential, Commercial and Industrial zones may support animal grazing and crop cultivation as an interim use prior to development.

AG-P5.5 To protect agricultural areas from flooding, all urban/residential development projects shall provide a drainage plan prepared by a registered civil engineer that, at a minimum, addresses:

a. Pre-development drainage conditions for the development site, including peak runoff rates and runoff volumes.
b. Post-development drainage conditions, including changes in peak runoff rates and runoff volumes.
c. Off-site drainage or flooding impacts and proposed or recommended mitigation measures.
d. Mechanisms for maintenance of drainage facilities.

Land Use Element

Goal LU-13 Plan for growth and protect agriculture in the Chico area through the Chico Area Greenline.

LU-P13.1 Maintain the Chico Area Greenline, which shall be located as shown on Figure LU-7. [see Butte County General Plan]

LUP13.3 Recognize the Chico Area Greenline as the boundary between the "Urban Side of the Chico Area Greenline" and the "Agricultural Side of the Chico Area Greenline."

LU-P13.7 Conserve and protect for agricultural use the lands in the Chico area that are situated on the Agricultural Side of the Chico Area Greenline.

LU-P13.8 Accommodate future urban and suburban growth that occurs in the Chico area of Butte County on lands situated in the Urban Side of Chico Area Greenline.

Chico Municipal Code

Chapter 19.64 Agricultural Preservation Standards establishes standards to preserve and protect agricultural lands and operations within the City. Among other provisions, this includes Section 19.64.040 (Agricultural Buffers) which requires that agricultural buffers be implemented between new development and adjacent commercial crop production along the City's SOI boundary. Buffers must provide at least 100 feet of physical separation between the agricultural use and any habitable structure. This separation may include roadways, pedestrian/bicycle routes, and/or creeks or other waterways.

3.2.4 - Methodology

The proposed project was evaluated for potential impacts on agriculture and forestry resources resulting from implementation of the proposed project through a review of applicable plans and policies. FirstCarbon Solutions (FCS) personnel also reviewed resources from the California Department of Conservation as well as aerial photographs, topographical maps, and street maps to identify the status of the project site and surrounding land uses. The City's and the County's General Plans were reviewed (as relevant) to confirm applicable land use, zoning, and policies related to agricultural land uses.

California Land Evaluation and Site Assessment Model

The LESA Model is a method to evaluate the relative importance of farmland and the potential significance of its conversion on a site-by-site basis. Under CEQA, lead agencies may refer to the LESA Model in their environmental analysis but are not required to do so. The LESA Model incorporates both land evaluation and site assessment through the evaluation of land capability, Storie Index, water availability, land uses within 0.25 mile, and nearby protected resources lands (such as Williamson Act contracted lands). A resulting LESA score can be used to determine whether the conversion of a property would be significant under CEQA.

The LESA prepared for the proposed project can be found in Appendix B of this Draft EIR.

3.2.5 - Thresholds of Significance

Significance Criteria

The City, as Lead Agency, in its discretion has decided to utilize the criteria in the CEQA Guidelines Appendix G, to determine whether impacts of the proposed project to agriculture and forestry resources would be significant environmental effects. Would the proposed project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), Timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government

Code Section 51104(g))? (This threshold is not discussed in this section; instead refer to Chapter 4, Effects Found not to be Significant, for the respective analysis.)

d) Result in the loss of forest land or conversion of forest land to non-forest use? (This threshold is not discussed in this section; instead refer to Chapter 4, Effects Found not to be Significant, for the respective analysis.)

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use?

3.2.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and operation of the proposed project and provides feasible mitigation measures where appropriate.

Convert Farmland to Nonagricultural Use

Impact AG-1:	**The proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use but would not result in a significant impact based on the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation.**

According to the FMMP California Important Farmland Finder, none of the project site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The BYSP Area is designated as "Other Land."[12] This designation is ascribed to land not included in any other FMMP mapping category. Accordingly, the BYSP Area is not mapped as Prime, Unique, or Farmland of Statewide Importance pursuant to the FMMP and the proposed project would not convert any mapped Farmland within the BYSP Area.

The BYSP's proposed off-site stormwater basin and related infrastructure would be located to the south of the BYSP Area, within the jurisdiction of Butte County, in the off-site improvement area. According to the FMMP, the off-site improvement area is designated as Prime Farmland. Prime Farmland is defined as irrigated land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops.[13] However, it is noted that the northern portion of the off-site improvement area, where the stormwater basin would be constructed, consists of former orchard lands (orchard trees were removed in 2018) that are not actively irrigated or farmed. Therefore, while these lands are shown on the FMMP as Prime Farmland, they do not currently reflect a key characteristic of Prime Farmland. Regarding the southern portion of the off-site improvement area, improvements installed on these lands to serve the proposed project would

[12] California Department of Conservation. 2024. California Williamson Act Enrollment Finder. Website: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. Accessed December 9, 2024.
[13] Ibid.

primarily consist of below-ground stormwater lines within the selected Stormwater Alignment Option Area which would not significantly impede future agricultural activities.

Nevertheless, given the presence of approximately 6.6 acres of Prime Farmland designated as such by the FMMP that would be impacted by the proposed project, a LESA Model was completed for the proposed project to ensure a robust analysis of the potential agricultural resource impacts. The LESA Model is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features. It was developed to provide a methodology to assess potentially significant impacts related to agricultural land conversions under environmental review processes such as CEQA reviews. The LESA Model Report can be found in Appendix B of this Draft EIR.

For the purposes of the LESA Model analysis, only the areas within the off-site improvement area and Stormwater Alignment Option Areas that would be temporarily or permanently impacted by the implementation of the proposed project were considered. Approximately 7.1 acres within the off-site improvement area and Stormwater Alignment Option Areas would be temporarily or permanently impacted by the proposed project. This area is herein referred to as the "Off-site Stormwater Infrastructure Permanent and Temporary Impact Area." The Off-site Stormwater Infrastructure Permanent and Temporary Impact Area contains approximately 6.6 acres of "Prime Farmland" and approximately 0.5 acre of "Other Land." Based on the LESA methodology, the Off-site Stormwater Infrastructure Permanent and Temporary Impact Area yields a LESA Model score of 64.5. For projects that score between 60 and 79 points, the LESA Model's significance criteria indicates that the impact is not significant if *either* the Land Evaluation *or* Site Assessment sub-score portion of the LESA Model is less than 20 points. In this case, the Land Evaluation sub-score is 48.8 points, and the Site Assessment sub-score is 15.8 points. Therefore, because the LESA Model score is 64.5 (i.e., between 60–79 points) and the Site Assessment sub-score is less than 20 points (i.e., 15.8 points), the proposed project's impacts related to the conversion of agricultural land to nonagricultural use would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Agricultural Use Zoning or Williamson Act Contract

Impact AG-2:	**The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract.**

Williamson Act Lands

As discussed above, the project site, which consists of, collectively, the BYSP Area, the off-site improvement area, and the Stormwater Alignment Option Areas, is not covered by any Williamson Act Contracts. According to the Butte County General Plan, the nearest property under a Williamson Act Contract is located approximately 0.45 mile to the southwest. Therefore, the proposed project would not result in impacts related to lands under a Williamson Act Contract.

Agricultural Zoning

As previously discussed, the BYSP Area is not zoned for agricultural use. Moreover, the BYSP Area would be rezoned to SPA to ensure consistency with the proposed project.

However, the off-site improvement area and Stormwater Alignment Option Areas are located in unincorporated Butte County and are designated AG and zoned AG-40. The stormwater basin would involve excavation, construction, and installation of the basin within the off-site improvement area. In terms of the related proposed stormwater alignment, there are two alignment options being considered for the routing and configuration of the stormwater basin outfall, although only one would be built (refer to Exhibit 2-2b). Alignment Option 1 would travel directly southeast from the stormwater basin to Comanche Creek. This option would require some orchard tree removal and may limit, although not preclude agricultural activities directly above the alignment. Alignment Option 2 would traverse eastward from the stormwater basin to Estes Road where it then would turn south to Comanche Creek along an existing access path. This option may also limit (but to a lesser degree than Option 1) but not preclude agricultural activities because Option 2 would follow a path that contains existing roads and pathways that are not farmed and not likely to be farmed in the future given that they are established roads. Under either alignment option, the area of agricultural land that would be disturbed would be small (refer to Exhibit 2-2b).

As noted above, the off-site improvement area and Stormwater Alignment Option Areas located in the unincorporated area to the south of the BYSP Area is zoned as AG-40, which is defined by the Code of Ordinances as a sub-zone with a minimum parcel size of 40 acres. According to the Butte County General Plan 2040, the AG designation allows the cultivation, harvest, storage, processing, sale, and distribution of all plant crops, and allows livestock grazing, animal husbandry, intense animal uses, and animal matter processing. According to the Butte County Code of Ordinances, the purpose of the AG zoning designation is to support and maintain the County's agricultural sector. Permitted uses for the AG zone includes crop cultivation, animal grazing, stock ponds, and agricultural processing.

According to the Butte County Code of Ordinances, certain nonagricultural uses are permitted within agricultural zones with the issuance of a zoning clearance, Administrative Permit, Minor Use Permit or Conditional Use Permit. Table 3.2-2 below details utility land uses which may be permitted within the County's AG-40 zone.

Table 3.2-2: Permitted Uses in the Butte County AG-40 Zone

Use	Definition	Permit Type
Utilities, Major	Large-scale facilities of a regional nature including Tier 4 Solar Energy Systems, Large Wind Energy Systems, power plants, hydro-electric facilities, electricity transmission substations, water storage tanks, community wastewater treatment plants, commercial and industrial composting operations, and similar facilities. Utilities, Major includes uses that are permitted by a Conditional Use Permit in most zones, refer to the Use Regulation Tables for each zone.	Conditional Use Permit
Utilities, Intermediate	Utility facilities at a level between Utility, Accessory and Utility, Major including Tier 3 Solar Energy Systems and Small Wind Energy Systems. Utilities, Intermediate includes uses that are permitted by a Minor Use Permit in most zones, refer to the Use Regulation Tables for each zone.	Minor Use Permit
Utilities, Accessory	Utility facilities that are accessory to a permitted use including Tier 2 Solar Energy Systems and Agricultural Wind Energy Systems. Utilities, Accessory includes uses that are permitted by an Administrative Permit in most zones, refer to the Use Regulation Table for each zone.	Administrative Permit
Utilities, Minor	Utility facilities that are necessary to support on-site development on the same parcel that involves only minor structures. Examples of Utilities, Minor include Tier 1 Solar Energy Facilities, Auxiliary Rooftop and Micro Wind Energy Systems, power lines, water and sewer lines, water transmission lines, storm drainage facilities, transformers, and water and sewer pump stations. Utilities, Minor includes uses are permitted by right with a building permit in all zones.	Permitted Use, Subject to Zoning Clearance
Notes: Butte County Code of Ordinances, Chapter 24, Article VII, Division 1, Section 24-304 Definitions. Source: Butte County Code of Ordinances, Chapter 24, Article II, Division 1, Section 24-14 Development standards for agricultural zones.		

As indicated in the table above, the "Utilities, Minor" permitted use includes storm drainage facilities. However, the proposed storm drainage facilities would not be located "on the same parcel"; therefore, while the storm drainage facilities would fall into the Utilities, Minor category, Butte County may determine that permitting beyond zoning clearance (e.g., Administrative Permit for Utilities Accessory) would be required. Nonetheless, the proposed stormwater improvements that would be located within unincorporated Butte County would be consistent with the current AG-40 zoning, subject to obtaining the necessary permitting from Butte County, and, therefore, the proposed project would not conflict with existing zoning for agricultural use.

In conclusion, implementation of the proposed project would not conflict with any Williamson Act Contract or existing zoning for agricultural use and impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Conversion of Farmland or Forest Land

Impact AG-3: The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use.

The project site does not contain any forestry uses or land designated or zoned for forestry resources by the City or the County (as discussed more fully in Chapter 4, Effects Found not to be Significant). In addition, surrounding uses do not contain any forestry uses or land designated or zoned for forestry resources by the City or the County. Therefore, the proposed project would not convert forest land to non-forest use, and impacts would be less than significant in this regard. The areas of unincorporated Butte County to the south and west the project site include areas of farmland production and a residential community. These County lands surrounding the site are designated Very Low Density Residential (up to 1 dwelling unit/acre) and predominantly Agriculture (20 acre to 160 acre minimum) according to the Butte County General Plan Land Use Map[14] and are not under Williamson Act Contracts.[15] The proposed project would result in development of the BYSP Area and off-site improvement area. However, development of the proposed project would not result in conversion of farmland on adjacent agricultural land because they are not within the development area of the proposed project or within City limits. In addition, the Chico Area Greenline, which directs urban growth to the "Urban Side," as well as the existing Union Pacific Railroad (UPRR) railroad serve as a barriers to urban development. Furthermore, these lands would be retain their agricultural zoning designation for continued agricultural use in the future.

Moreover, the proposed project would be required to adhere to applicable Right-to-Farm and buffer provisions described above, which would help to avoid any potential land use incompatibility that could otherwise potentially trigger a premature conversion of agricultural to urban uses.

Based on the foregoing reasons, impacts related to the conversion of Farmland would be less than significant.

[14] Butte County 2012. General Plan Land Use Designations. Website: https://www.buttecounty.net/DocumentCenter/View/1887/Butte-County-General-Plan-2030-Land-Use-Map-PDF?bidId=. Accessed October 9, 2024.

[15] California Department of Conservation. 2024. California Williamson Act Enrollment Finder. Website: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. Accessed October 9, 2024.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.2.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis includes past, present, and reasonably foreseeable future projects on lands within the City of Chico and the remaining portions of Butte County. This scope is appropriate for agriculture and forestry resources because the City and Butte County contain significant areas of integrated agricultural production. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, including those listed in Table 3-1, would result in a cumulatively significant impact with respect to agriculture and forestry resources. This analysis then considers whether the incremental contribution of the impacts associated with implementation of the proposed project would be cumulatively considerable. Both conditions must apply for cumulative effects to rise to a level of significance.

No land within the City is used for forestry purposes, and no land within the City is designated or zoned for forestry resources. The project site does not contain any forestry uses or land designated or zoned for forestry resources by the City or the County. Therefore, there are no cumulative impacts with respect to forestry resources and the proposed project does not have any contribution to potential cumulative impacts. See Section 4 (Effects Found not to be Significant) for additional information in this regard.

Within the City's municipal boundary and SOI, the primary use of land is developed urban and suburban uses. Agricultural uses within the City are limited to specific areas consisting of small agricultural operations and remnant orchards on undeveloped lands. [16] Cumulative projects listed in Table 3-1 would not convert any Prime Farmland or agricultural zoned lands to nonagricultural uses.

Moreover, the City General Plan's vision includes the preservation of viable agricultural resources surrounding the City by creating a more dense and compact urban form, establishing urban growth limits, and providing appropriate buffers and transitions between urban and agricultural uses. The City and County established the Greenline in 1982 to act as a buffer between the City's urban areas and prime agricultural soils to the west. Furthermore, to reduce potential cumulative impacts on agricultural uses, the approved General Plan includes Policies OS-5.1, OS-5.2, OS-5.3, OS-5.4, and Action OS-5.2.1, which require maintenance of the Greenline, and minimization of conflicts through the use of buffers. Nonetheless, the General Plan EIR concluded that buildout of the City's land use vision would result in a significant and unavoidable impact related to the conversion of Important

[16] City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report. 4.2 Agricultural Resources. September.

Farmlands to nonagricultural use, primarily related to the North Chico Specific Planning Area, the Bell Muir Special Planning Area, and the Pomona Avenue Opportunity Site; thus, this impact has previously been disclosed and the Chico City Council adopted a Statement of Overriding Considerations in connection therewith. The project site is not in or near any of these sites. Based on the foregoing, there would be a cumulative significant impact with respect to agricultural resources.

In terms of the proposed project's contribution to this impact, while the BYSP Area does not contain any active agricultural operations or any Farmland, the proposed off-site improvement area and the Stormwater Alignment Option Areas have been designated as Prime Farmland on the FMMP and are zoned for agricultural uses by the County. However, as discussed in Impacts AG-2 and AG-3, these lands are not currently irrigated; the LESA Model analysis determined impacts would be less than significant; and the proposed stormwater improvements would not significantly impede agricultural activities. Additionally, the proposed project would be required to comply with the above policies and actions. Based on the foregoing, the proposed project's contribution to the identified significant cumulative impact would not be cumulatively considerable. As such, no significant impact to agriculture and forestry resources would occur as a result of the proposed project.

3.3 - Air Quality

This section describes existing air quality conditions regionally and locally as well as the relevant regulatory framework. This section also evaluates the potential impacts related to air quality that could result from implementation of the proposed project. The analysis in this section is based, in part, on project-specific air quality modeling results utilizing California Emissions Estimator Model (CalEEMod) Version 2022.1.1, and the American Meteorological Society/United States Environmental Protection Agency (EPA) AERMOD air dispersion model (Version 22112). Complete modeling output is provided in Appendix C. The following public comments were received during the Notice of Preparation (NOP) scoping period related to air quality.

- Recommendation to use the latest version of CalEEMod to perform modeling and quantification of pollutants created by construction and operational activities to estimate impacts of criteria air pollutants as well as greenhouse gases.
- Air quality and health impacts from gas-burning appliances can be significant, and requests for all-electric building as a mitigation.
- Air quality impacts on nearby residents due to increased traffic and construction emissions.
- Release of toxic air contaminants during ground disturbance.

This section addresses the foregoing comments, as required under CEQA. For example, Section 3.3.5, below, discusses toxic air contaminant and health risk impacts during project construction. For impacts related to potential accidental release of soil contaminants during ground disturbance, see Section 3.9, Hazards and Hazardous Materials.

3.3.1 - Environmental Setting

Regional Geography and Climate

The project site is located within the City of Chico in Butte County (with a small portion on unincorporated County land adjacent to the City's boundaries) within the Sacramento Valley Air Basin (Air Basin). The Air Basin covers 11 counties, including all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta counties and parts of Solano and Placer counties. The climate in the Air Basin is characterized by hot, dry summers and cool, wet winters. Chico's annual average temperature is 61 degrees Fahrenheit, with summer highs usually in the 90s and winter lows usually in the 30s. Rainfall in Chico averages about 26 inches per year, with about 55 percent of rainfall occurring in winter and 2 percent during summer. Prevailing winds are moderate in strength and vary from dry land flows from the north to moist ocean breezes from the south. The mountains surrounding the Air Basin create a barrier to airflow, which under certain meteorological conditions trap pollutants in the Air Basin.

More specifically, the City of Chico is located within the Northern Sacramento Valley Air Basin (NSVAB) which consists of the seven northern counties within the Sacramento Valley (Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba counties) and bounded on the north and west by the Coastal Mountain Range and on the east by the southern portion of the Cascade Mountain Range

and the northern portion of the Sierra Nevada Mountains. These mountain ranges reach heights in excess of 6,000 feet above mean sea level (MSL), with individual peaks rising much higher. The mountains provide a substantial barrier to both locally created pollution and the pollution that has been transported northward on prevailing winds from the broader Sacramento Area. The NSVAB is shaped like an elongated bowl. Temperature inversion layers can act as a lid on the bowl, allowing air pollution to rise to unhealthy levels.

Although a significant area of the NSVAB is at elevations higher than 1,000 feet above MSL, the vast majority of its population lives and works below that elevation. The climate throughout the NSVAB is similar, especially regarding the valley floor where the majority of the population resides. Winter-time inversions at low elevations can result in poor air quality.

Air Pollutant Types, Sources, and Effects

Criteria Air Pollutants

Concentrations of criteria air pollutants are used as indicators of air quality conditions. Air pollutants are termed criteria air pollutants if they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. According to the EPA, criteria air pollutants are ozone, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), carbon monoxide (CO), lead, and sulfur dioxide (SO_2). Table 3.3-1 provides a summary of the types, sources, and effects of criteria air pollutants.

Table 3.3-1: Description of Criteria Pollutants of National and California Concern

Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Ozone	Ozone is a gas that is formed when reactive organic gases (ROG) and oxides of nitrogen (NO_X) Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.	Not emitted directly but a product of reaction of Oxides and Nitrogen and Organic Compounds.	Irritated respiratory system, reduced lung function, and aggravated chronic lung diseases. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children.
Particulate matter (PM_{10})	Airborne particulate matter is not a single pollutant, but rather is a mixture of many chemical species. Particles with diameter of 10 microns or less (PM_{10}) are inhalable into the lungs and can induce adverse health effects.	PM_{10} includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, windblown dust from open lands, pollen and fragments of bacteria.	PM_{10} deposits on the surfaces of the larger airways of the upper region of the lung and can induce tissue damage, and lung inflammation.
Particulate matter ($PM_{2.5}$)	Fine particulate matter is defined as particles that are	Emissions from combustion of gasoline,	$PM_{2.5}$ travels into and deposit on the surface of the deeper

Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
	2.5 microns or less in diameter ($PM_{2.5}$) and comprises a portion of PM_{10}.	oil, diesel fuel or wood produce much of the $PM_{2.5}$ pollution found in outdoor air, as well as a significant proportion of PM_{10}.	parts of the lung. Exposures have been associated with premature death, increased hospital visits for heart or lung causes, a, restricted activity day, and reduced lung function growth in children.
Nitrogen dioxide (NO_2)	Pungent gas that, along with fine airborne particulate matter, contributes to the reddish-brown haze characteristic of smoggy air in California.	NO_2 is not emitted directly but formed via reactions between oxides of nitrogen and reactive volatile organic compounds. NO_2 levels in air vary with direct emission levels, as well as with changing atmospheric conditions, particularly the amount of sunlight.	Studies have shown correlations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.
Volatile organic compounds (VOC)	React with oxides of nitrogen to form ground level ozone and smog.	Include architectural and industrial coatings, consumer products and emissions from storage of petroleum fuels. Many VOCs, such as benzene, a component of gasoline and crude oil are also air toxics.	Effects vary significantly depending on the VOC compound itself. Toxic VOC components of industrial and consumer products will list the individual chemical and information on health and exposure information for the individual chemical.
Carbon monoxide (CO)	Carbon monoxide (CO) is a colorless, odorless gas. It results from the incomplete combustion of carbon-containing fuels.	Emitted from a wide variety of combustion sources, including motor vehicles, power plants, wildfires, and incinerators.	Binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain.
Sulfur dioxide (SO_2)	Gas with a pungent, irritating odor. SO2 is a member of a family of chemicals comprised of sulfur and oxygen that are collectively known as sulfur oxides (SOX) and emitted from combustion of sulfur-containing fuels.	Sources include combustion emissions from locomotives, ships, and off-road diesel equipment that are operated with fuels that contain high levels of sulfur. Industrial sources include natural gas and petroleum production and refining, and metal processing.	More adverse exposure impacts for people with asthma. Effects include irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity.

Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Lead (Pb)	Lead is a relatively soft and chemically resistant metal. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles.	Present in many soils (especially urban soils) due to the historical use of leaded gasoline in motor vehicles. Potential for emission from contaminated soil can get resuspended into the air. Industrial sources include ore and metals processing, waste incinerators, utilities, and lead-acid battery manufacturers.	Accumulates in the body and can adversely affect multiple organ systems of the body and people of every age group. Infants and young children are especially sensitive to even low levels of lead, which may contribute to developmental impacts.
Sulfates	A sub-fraction of ambient particulate matter, containing the fully oxidized ionic form of sulfur (SO_4^{2-}), in combination with metal and/or hydrogen ions. Can be a significant portion of fine particulate matter ($PM_{2.5}$).	Occurs primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur.	Has similar health effects as $PM_{2.5}$ including reduced lung function, aggravated asthmatic symptoms, and increased risk of emergency department visits, hospitalizations, and death in people who have chronic heart or lung diseases.
Visibility-Reducing Particles	Haze-causing particulate matter (PM) particles which vary greatly in shape, size and chemical composition, and come from a variety of natural and man-made sources. Particles can travel hundreds of miles causing visibility impairment.	Some particles are directly emitted to the air such as windblown dust and soot. Others are formed in the air from the chemical transformation of gaseous which are the major constituents of fine PM.	Haze not only impacts visibility, but some haze-causing pollutants have been linked to serious health problems and environmental damage as well. Exposure of $PM_{2.5}$ and PM_{10} are known to contribute to a broad range of adverse health effects.
Vinyl Chloride	Highly toxic, chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. Is also regulated as a toxic air contaminant (TAC). Exposure is primarily an occupational concern.	Industrial polyvinyl chloride (PVC) production facilities. Also emitted from microbial breakdown of chlorinated solvents. Detected at trace levels near landfills, sewage treatment plants, and hazardous waste sites.	Short-term exposure to high levels vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term inhalation exposures linked to increased cancer cases.
Hydrogen Sulfide	Flammable, colorless, poisonous gas that smells like rotten eggs. Regulated as a nuisance based on its odor detection level.	Sewage treatment facilities and landfills and petrochemical plants. Also emitted from the bacterial decomposition of human and animal wastes. Natural sources include geothermal fields.	Tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting.

Pollutant	Physical Description and Properties	Sources	Most Relevant Effects from Pollutant Exposure
Sources: California Air Resources Board (ARB). 2023. Ozone & Health. Website: https://ww2.arb.ca.gov/resources/ozone-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Inhalable Particulate Matter & Health. Website: https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Nitrogen Dioxide & Health. Website: https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Carbon Monoxide & Health. Website: https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed April 4, 2024 California Air Resources Board (ARB). 2023. Sulfur Dioxide & Health. Website: https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Lead & Health. Website: https://ww2.arb.ca.gov/resources/lead-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Sulfate & Health. Website: https://ww2.arb.ca.gov/resources/sulfate-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Visibility-Reducing Particles & Health. https://ww2.arb.ca.gov/resources/visibility-reducing-particles-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Vinyl Chloride & Health. Website: https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed October 9, 2024. California Air Resources Board (ARB). 2023. Hydrogen Sulfide & Health. Website: https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health. Accessed October 9, 2024.			

Toxic Air Contaminants

Toxic air contaminants (TACs) are defined as air pollutants that may cause or contribute to an increase in mortality or serious illness or pose a hazard to human health. Air pollutant human exposure standards are identified for many TACs, including the following common TACs relevant to development projects: PM, fugitive dust, lead, and asbestos. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health impact may pose a threat to public health even at low concentrations. TACs can cause long-term health effects (such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage) or short-term acute affects (such as eye watering, respiratory irritation, runny nose, throat pain, or headaches). For TACs that may cause cancer, all concentrations present some risk.

California regulations include over 200 listed TACs,[1] including 189 compounds also identified by the EPA as Hazardous Air Pollutants.[2] Two TACs of common concern during construction and development activities are diesel particulate matter (DPM) and asbestos. Airborne lead and arsenic are also TACs of concern. Lead is particularly dangerous to children because their growing bodies absorb more lead than adults' bodies do and their brains and nervous systems are more sensitive to the damaging effects of lead. Babies and young children can be exposed to lead through putting objects with lead dust or soil in their mouths, through eating or drinking foods or drinks containing lead or from dishes and glass that contain lead, by inhaling lead dust, or from playing with toys that

[1] California Air Resources Board (ARB). Identified toxic Air Contaminants. Website: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed October 9, 2024.
[2] Ibid.

contain lead. Lead-based paint (LBP) is the most significant source of lead exposure in the U.S. today. Exposure can be created when LBP is improperly removed from surfaces by dry-scraping, sanding, or open-flame burning.[3]

Arsenic can be inhaled from air emissions resulting from the burning of fossil fuels that contain arsenic, cotton gins, glass manufacturing operations, pesticide manufacturing facilities, smelters, and tobacco smoke.[4]

Fine particle pollution can be emitted directly or formed secondarily in the atmosphere. $PM_{2.5}$ health impacts are of concern because particles can be deposited deep in the lungs, causing respiratory effects. For the purposes of this analysis, exhaust emissions of DPM are represented as exhaust emissions of PM_{10}. Studies indicate that DPM poses the greatest health risk among airborne TACs. A 10-year ARB research program demonstrated that DPM from diesel fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic long-term health risk. DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel fueled internal combustion engines emit DPM, the composition of the emissions varies depending on engine type and age, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Diesel Particulate Matter

Within these toxics, DPM is the overwhelming contributor. Diesel engine emissions are believed to be responsible for about 70 percent of California's estimated known cancer risk attributable to TACs.[5] Diesel in particular, because of its high toxicity, may pose a threat to public health even at very low concentrations.

Asbestos

Asbestos is also another TAC and federal hazardous air pollutant of concern during construction and renovation. Asbestos is the common name for a group of naturally occurring fibrous minerals that can separate into thin, inhalable fibers. Asbestos found in many parts of California and its emissions present a significant risk to human health on a Statewide and local level. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. While there are many different types of asbestos; all forms of asbestos are harmful to human health. Asbestos has been known to cause lung cancer and mesothelioma, a cancer of the lining of lung tissue that is nearly always fatal.[6] Since asbestos is naturally occurring in rock structures it is a concern during construction and mining operations when it has the potential to be present.

Because of its properties (fiber strength and heat resistance) asbestos has been used in a variety of building construction materials as insulation and as a fire retardant. It historically was used in roofing

[3] United States Environmental Protection Agency (EPA). Indoor Air Quality. Lead's Impact on Indoor Air Quality. Website: https://www.epa.gov/indoor-air-quality-iaq/leads-impact-indoor-air-quality. Accessed December 10, 2024.

[4] Agency for Toxic Substances and Disease Registry. 2023. What are the Routes of Exposure to Arsenic. Website: https://www.atsdr.cdc.gov/csem/arsenic/what_routes.html. Accessed December 10, 2024.

[5] California Air Resources Board (ARB). 2023 Summary: Diesel Particulate Matter Health Impacts. Website: https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts. Accessed December 10, 2024.

[6] United States Environmental Protection Agency (EPA). 2023. Learn About Asbestos. Website: https://www.epa.gov/asbestos/learn-about-asbestos#find. Accessed December 10, 2024.

shingles, ceiling and floor tiles. It is only a health concern when asbestos containing material is disturbed or damaged in some way releasing the particles and inhalable the fibers into the air. Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

Valley Fever

Valley Fever, or coccidioidomycosis, is an infection caused by inhalation of spores of the fungus, *Coccidioides immitis* (*C. immitis*). Spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust, including dust storms, grading, and recreational off-road activities, contribute to greater exposure.

Much of California is considered an endemic area for Valley Fever. The California Department of Public Health (CDPH) has been tracking and collecting individual case data since 1995, however, Valley Fever is underdiagnosed and under-reported, as symptoms are similar to many other respiratory illnesses, such as influenza, COVID-19, or bacterial pneumonia.

The incidence of Valley Fever has increased five-fold since 2005 with the largest increases primarily in Northern San Joaquin Valley, Central Coast, and Southern Coast regions. Warming temperatures, drought, aridity, windstorms, and wildfires contribute to the proliferation of the Valley Fever fungus and the dissemination of its spores, leading to a rise in the number of cases. In 2021, there were over 8,000 reported cases of Valley Fever in California with an average incidence of 20.1 individuals per 100,000. The incidence in Butte County is relatively low; however, there has been the same recent trend of increased cases observed Statewide. In 2021, there were 13 reported cases in Butte County (5.7 per 100,000 population) in contrast to three cases in 2016 and none in 2015.

The distribution of *C. immitis* is not uniform, and growth sites are commonly small (a few tens of meters) and widely scattered. The fungal spores are too small to be seen by the naked eye, and there is no reliable way to test the soil for spores before working in a particular place. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1. Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface).
2. Old (prehistoric) Native American campsites near fire pits.
3. Areas with sparse vegetation and alkaline soils.
4. Areas with high salinity soils.
5. Areas adjacent to arroyos (where residual moisture may be available).
6. Packrat middens.
7. Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils.
8. Sandy, well-aerated soil with relatively high water-holding capacities.

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1. Cultivated fields.
2. Heavily vegetated areas (e.g., grassy lawns).
3. Higher elevations (above 7,000 feet.)
4. Areas where commercial fertilizers (e.g., ammonium sulfate) have been applied.
5. Areas that are continually wet.
6. Paved (asphalt or concrete) or oiled areas.
7. Soils containing abundant microorganisms.
8. Heavily urbanized areas where there is little undisturbed virgin soil.

The project site currently contains various structures, hardscape, and vegetation and is surrounded by suburban and agricultural zones. For many decades, portions of the project site have been used for industrial uses. Exposure to *C. immitis* could occur during soil-disturbing activities in areas with deposits present; however, because most of the project site and immediately surrounding vicinity consists of urbanized development and developed suburban areas or agricultural areas where fertilizers are used, the project site would have low probability of *C. immitis* growth on-site or exposure from disturbed soil. No further analysis is needed.

Air Quality

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed, wind direction, and air temperature inversions interact with the physical features of the landscape to determine the movement and dispersal of air pollutant emissions and, consequently, their effect on air quality.

Regional Air Quality

The Butte County Air Quality Management District (BCAQMD) is the regional agency regulating air quality within Butte County. The Air Pollution Control Districts and Air Quality Management Districts (Districts) for the counties located in the northern portion of the Sacramento Valley together establish the Northern Sacramento Valley Planning Area (NSVPA). The NSVPA and Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba counties have agreed to jointly prepare an Air Quality Attainment Plan. Glenn and Colusa Counties are in attainment but continue to participate in the regional effort.

Air Pollutant Standards and Attainment Designations

Air pollutant standards have been adopted by the EPA and the California Air Resources Board (ARB) for the following six criteria air pollutants that affect ambient air quality: ozone, NO_2, CO, SO_2, lead, and PM, which is subdivided into two classes based on particle size: particulate matter (PM) with aerodynamic diameters equal to or less than 10 microns (PM_{10}), and PM with aerodynamic diameters equal to or less than 2.5 microns ($PM_{2.5}$). These air pollutants are called “criteria air pollutants” because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. California has also established standards for TACs such as visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride, among others. Hydrogen sulfide (H_2S) is regulated as a nuisance based on its odor detection level. If the standard

were based on adverse health effects, it would be set at a much higher level. Vinyl chloride is a TAC and currently regulated as one, but California established a need to regulate it with a health-based "criteria" prior to the establishment of its toxics programs. The current federal and State air quality standards are summarized in Table 3.3-2 below.

Table 3.3-2: Federal and State Air Quality Standards

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]
Ozone	1 Hour	0.09 ppm	—
	8 Hour	0.070 ppm	0.070 ppm[f]
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm
	3 Hour	—	0.5 ppm
	24 Hour	0.04 ppm	0.14 (for certain areas)
	Annual	—	0.030 ppm (for certain areas)
Lead[e]	30-day	1.5 µg/m^3	—
	Quarter	—	1.5 µg/m^3
	Rolling 3-month average	—	0.15 µg/m^3
Particulate matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3
	Mean	20 µg/m^3	—
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3
	Annual	12 µg/m^3	15.0 µg/m^3
Visibility-reducing particles	8 Hour	See note below[d]	
Sulfates	24 Hour	25 µg/m^3	—
Hydrogen sulfide	1 Hour	0.03 ppm	—
Vinyl chloride[e]	24 Hour	0.01 ppm	—

Notes:
µg/m^3 = micrograms per cubic meter
30-day = 30-day average
Annual = Annual Arithmetic Mean
ppm = parts per million (concentration)
Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect public health. All standards listed are primary standards except for 3-hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]

[b] To attain the 1-hour nitrogen dioxide national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).
[c] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 parts per billion (ppb). The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
[d] Visibility-reducing particles: In 1989, the ARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.
[e] The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for implementing control measures at levels below the ambient concentrations specified for these pollutants.
[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015, and became effective on December 28, 2015.
Source: California Air Resources Board (ARB). 2016. Ambient Air Quality Standards. May 4.

Air quality monitoring stations operated by the ARB and BCAQMD measure ambient air pollutant concentrations in the Butte County portion of the NSVAB. In general, Butte County and the NSVAB experience low concentrations of most pollutants compared to federal or State standards.

Both the EPA and ARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. These designations identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. "Attainment" status refers to those regions that are meeting federal and/or State standards for a specified criteria pollutant. "Nonattainment" refers to regions that do not meet federal and/or State standards for a specified criteria pollutant. "Unclassified" refers to regions with insufficient data to determine the region's attainment status for a specified criteria air pollutant. Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

Air Pollutant Standards and Attainment Designations

The current attainment designations for Butte County portion of the Air Basin are shown in Table 3.3-3.

Butte County is designated as nonattainment for both the State and federal ozone standards. The County is designated as nonattainment for State $PM_{2.5}$ standards but in attainment for all federal PM standards.

Table 3.3-3: Butte County Attainment Status

Pollutant	Designation	
	State	Federal
Ozone—1-hour	Nonattainment	—[1]
Ozone—8-hour	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
PM_{10}—24 hour	Nonattainment	Attainment
PM_{10}—Annual	Attainment	—
$PM_{2.5}$—24 hour	—[1]	Attainment
$PM_{2.5}$—Annual	Nonattainment	Attainment

Notes:
[1] No Established Standard
Source: Butte County Air Quality Management district (BCAQMD). 2018.

Ozone is a pollutant of regional concern and is a concern mostly in the summer months when warmer temperatures favor its formation. Wildfires and burning influence $PM_{2.5}$ significantly.

Butte County was officially designated attainment for the national $PM_{2.5}$ standard in 2018 after meeting the standard since 2013[7]. The maintenance plan demonstration makes the case that residential wood-burning is the primary contributor to the air quality problem in the Chico nonattainment area and that secondary $PM_{2.5}$, geological materials, and elements are relatively small contributors. The attainment demonstration attributes the attainment of the $PM_{2.5}$ standard to control measures adopted and implemented by BCAQMD and ARB, including regulations that control wood-burning devices and those which regulate and prohibit open burning. State measures addressing emissions from the exhaust of on-road and off-road mobile sources including emissions from construction equipment and heavy-duty truck exhaust also was attributed to a reduction in $PM_{2.5}$ emissions which allowed the region to meet attainment.

California law does not require that California Ambient Air Quality Standards (CAAQS) be met by specified dates as is the case with National Ambient Air Quality Standards (NAAQS). Rather, it requires incremental progress toward attainment.

Local Air Quality

Meteorology acts on the emissions released into the atmosphere to produce pollutant concentrations. These airborne pollutant concentrations are measured throughout California at air quality monitoring sites. The ARB operates a Statewide network of monitors. Data from this network

[7] California Air Resources Board (ARB). 2017. Redesignation Request and Maintenance Plan. Website: https://ww2.arb.ca.gov/resources/documents/2017-chico-cabutte-county-pm25-redesignation-request-and-maintenance-plan. Accessed December 10, 2024.

is supplemented with data collected by local air districts, other public agencies, and private contractors.

The air quality monitoring station closest to the project site is the Chico-East Avenue Monitoring Station (Chico Station), which is located approximately 3 miles north of the project site at 984 East Avenue, Chico. Table 3.3-4 summarizes the recorded ambient air data at the Chico Station for 2020 through 2022. As shown in Table 3.3-4, the recorded data show exceedances of the California standards for ozone (1-hour and 8-hour) and $PM_{2.5}$ and federal standards for ozone (8-hour), PM_{10}, and $PM_{2.5}$ (24 hour) on one or more occasions from 2020 through 2022. No exceedances of either the State or national standards were recorded for nitrogen dioxide (NO_2).

Table 3.3-4: Ambient Air Monitoring Data

Air Pollutant	Averaging Time	Item	2020	2021	2022
Ozone	1 Hour	Max 1 Hour (ppm)	0.097	0.078	0.082
		Days > State Standard (0.09 ppm)	1	0	0
	8 Hour	Max 8 Hour (ppm)	0.083	0.069	0.068
		Days > State Standard (0.07 ppm)	1	0	0
		Days > National Standard (0.075 ppm)	1	0	0
Nitrogen dioxide (NO_2)	Annual	Annual Average (ppb)	5	5	5
		Days > National Standard (9 ppb)	0	0	0
	1 Hour	Max 1 Hour (ppb)	33.4	31.8	29.6
		Days > National Standard (100 ppb)	0	0	0
Inhalable coarse particles (PM_{10})	24 hour	24 Hour ($\mu g/m^3$)	391.3	130.3	76.2
		Days > State Standard (50 $\mu g/m^3$)	ND	ND	10
		Days > National Standard (150 $\mu g/m^3$)	10	0	0
	Annual	Annual Average ($\mu g/m^3$)	35.6	26.3	19.3
		Annual > State Standard (20 $\mu g/m^3$)	ND	ND	19.6
Fine particulate matter ($PM_{2.5}$)	24 Hour	24 Hour ($\mu g/m^3$)	329.3	102.7	42.8
		Days > National Standard (35 $\mu g/m^3$)	33	13	2
	Annual	Annual Average ($\mu g/m^3$)	16.1	11.2	7.7
		Annual > State Standard (12 $\mu g/m^3$)	1	0	0

Notes:
> = exceed
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
ppb = parts per billion
ND = no data
max = maximum
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard

Air Pollutant	Averaging Time	Item	2020	2021	2022
Measurements are from the Chico-East Avenue Station. Source: California Air Resources Board (ARB). 2023. iADAM: Top 4 Summary. Website: https://www.arb.ca.gov/adam/select8/sc8start.php. Accessed October 9, 2024.					

Air Quality Index

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest comparison is to the State and federal ozone standards. If concentrations are below the standard, it is reasonable to conclude that no significant health impact would occur to anyone as a result of the various air pollutants of concern. When concentrations exceed the applicable standard, Air Quality impacts will vary based on the amount by which the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 3.3-5 provides a general description of the health impacts of different ozone and $PM_{2.5}$ concentrations while Table 3.3-6 show the AQI for ozone and $PM_{2.5}$ for the past 3 years.

Table 3.3-5: Air Quality Index and Health Effects

Levels of Concern	Color	AQI Range	Ozone ppm (8-hour)	$PM_{2.5}$ (µg/m³) (24-hour)	Description of Air Quality
Good	Green	0–50	0–0.054	0–12	Air quality is satisfactory and air pollution poses little or no risk.
Moderate	Yellow	51–100	0.055–0.070	12.1–35.4	Air quality is acceptable; however, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	Orange	101–150	0.071–0.085	35.5–55.4	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy	Red	151–200	0.086–0.105	55.5–150.4	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	Purple	201-300	0.106–0.200	150.5–250.4	Health alert: The risk of health effects is increased for everyone.
Hazardous	Maroon	301 and higher	0.201 +	250.5+	Health warning of emergency conditions: everyone is more likely to be affected.

Table 3.3-6: Air Quality Index For Chico for 2020 though 2023

QI Index		Ozone ppm (8-hour)			$PM_{2.5}$ (µg/m³) (24-hour)		
Levels of Concern	Color	2020	2021	2022	2020	2021	2022
Good	Green	336	296	280	210	213	249
Moderate	Yellow	20	49	62	116	135	103
Unhealthy for Sensitive Groups	Orange	1	0	0	15	6	3
Unhealthy	Red	0	0	0	13	7	0
Very Unhealthy	Purple	0	0	0	3	0	0
Hazardous	Maroon	0	0	0	1	0	0
Days with AQI Values		357	345	342	359	361	355

Notes:
Air Quality Index (AQI) is based on air quality values at the Chico -East Avenue monitoring Station.
µg/m³ = micrograms per cubic meter
ppm = parts per million
Source: United States Environmental Protection Agency (EPA). Air Data–Multiyear Tile Plot. Website: https://www.epa.gov/outdoor-air-quality-data/air-data-multiyear-tile-plot. Accessed October 4, 2024.

Air Pollution Sensitive Receptors

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Residences, schools, day care centers, hospitals, nursing and convalescent homes, and parks are often identified as "sensitive receptors" since their occupants are sensitive to poor air quality. The groups identified with these land uses may have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. BCAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, day care centers, hospitals, and senior-care facilities.

Project Vicinity

The closest off-site air pollution sensitive receptors near the project site consist of residences located in a neighborhood directly adjacent to the project site to the north and east.

Project Site

The project site does not contain any sensitive land uses; therefore, no sensitive receptors currently exist on the project site.

Existing Air Pollutant Emissions

Project Site Vicinity

The primary sources of air pollutants (both criteria air pollutant and TACs) in the project site vicinity include the surrounding industrial, agricultural, and residential properties, and their building-related energy use and motor-related vehicle trips. Other activities that result in emissions include space

and water heating, landscape maintenance, and any surrounding industrial uses that can store, produce, decommission, or otherwise handle hazardous materials.

Project Site

The project site itself contains abandoned structures and roadways. There is an existing indoor recreational vehicle (RV) storage on-site that could generate mobile source emissions from vehicles visiting to and from the site. There are no other currently operating uses on-site.

3.3.2 - Regulatory Framework

Federal

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground level ozone, CO, sulfur oxides, nitrogen oxides, and lead. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards.[8] The federal standards are called NAAQS. The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health.

The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The purpose of the federal SIPs is to (1) demonstrate a state has the basic air quality management program components in place to implement a new or revised NAAQS; (2) identify the emissions control requirements that a state will rely on to attain and/or maintain the primary and secondary NAAQS; and (3) prevent air quality deterioration for areas that are in attainment with the NAAQS and reduce common or criteria pollutants emitted in nonattainment, updating the standards as more medical research is available regarding the health effects of the criteria pollutants. The SIP is

[8] United States Environmental Protection Agency (EPA). 2023. Clean Air Act Requirements and History. Website: https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history. Accessed December 10, 2024.

periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies.

EPA Emission Standards for New Off-Road Equipment

Before 1994, there were no standards to limit the amount of emissions from off-road equipment. In 1994, the EPA established emission standards for hydrocarbons, NO_X, CO, and PM to regulate new pieces of off-road equipment. These emission standards came to be known as Tier 1. Since that time, increasingly more stringent Tier 2, Tier 3, and Tier 4 (interim and final) standards were adopted by the EPA, as well as by the ARB. Each adopted emission standard was phased in over time. New engines built in and after 2015 across all horsepower sizes must meet Tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for Tier 4 final emissions standards.

State

California Air Quality Control Plan (State Implementation Plan)

As noted above, a SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for Statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to the ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms for attaining and maintaining air quality standards.

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards.

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation and required additional actions beyond the federal mandates. The ARB administers the CAAQS for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six federal standards listed above as well as visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are more stringent than the federal CAA; therefore, consistency with the CCAA will also demonstrate consistency with the federal CAA.

Other ARB responsibilities include but are not limited to overseeing local air district compliance with California and federal laws; approving local air quality plans; submitting SIPs to the EPA; monitoring air quality; determining and updating area designations and maps; conducting basic research aimed at providing a better understanding between emissions and public well-being, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Health and Safety Code Section 39655 and California Code of Regulations Title 17 Section 93000 (Substances Identified as Toxic Air Contaminants)

The ARB identifies substances as TACs as defined in Health and Safety Code Section 39655 and listed in Title 17, Section 93000 of the California Code of Regulations, "Substances Identified As Toxic Air Contaminants." As explained above, a TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there are thresholds set by regulatory agencies below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the State and federal governments have set ambient air quality standards. According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs for the State of California can be attributed to relatively few compounds, the most important of which is DPM from diesel fueled engines.

California Low Emission Vehicle Program

The ARB first adopted Low Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 SIP. In 2012, the ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.[9]

The most recent amendments in 2022, the Advanced Clean Cars II Regulations, applies to light-duty passenger car, truck and SUV emissions starting with the 2026 model year through 2035. It will take the State's already growing Zero-Emission Vehicle (ZEV) market and robust motor vehicle emission control rules and augment them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent zero-emission vehicles. By 2035 all new passenger cars, trucks and SUVs sold in California will be zero emissions.

[9] California Air Resources Board (ARB). 2013. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley. Accessed December 10, 2024.

California On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. The ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.[10]

California In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. More recent 2022 amendments to the regulation include:[11]

- Phase-out of the oldest off-road engines from operation—Tier 2 and model year 2003 or older on-road engines must be phased out from large/medium/small/ultra-small fleets in 2028/30/32/36, respectively.
- Restrictions on the addition of older engines to the fleet—Vehicles with Tier 3/4i and model year 2006 or older on-road engines cannot be added to a fleet from 2024/28/35 for large & medium/small/ultra-small fleets, respectively.
- All fleets must use SR-99 or R100 Renewable Diesel Fuel as of January 1, 2024.

California Truck and Bus Regulation

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. As of January 1, 2023, nearly all trucks and buses must have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[12]

[10] California Air Resources Board (ARB). 2013. The California Almanac of Air Quality and Emissions—2013 Edition. Website: http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm. Accessed December 11, 2024.

[11] California Air Resources Board (ARB). 2024. Rulemaking Documents. Website: https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation/rulemaking-documents. Accessed December 11, 2024.

[12] California Air Resources Board (ARB). 2015. On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. Website: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed December 11, 2024.

Small Off-Road Engine Regulation

Small Off-road Engines (SORE) are spark-ignition engines with rated power at or below 19 kilowatts (25 horsepower). The SORE regulations require new engines to be certified and labeled to meet emission standards and other requirements. Typical equipment types that use SORE include lawn and garden equipment, portable generators, and pressure washers. Recent amendments to the SORE regulation will require most landscaping equipment to be zero emissions beginning in 2024. Despite their small size, these engines are highly polluting. The volume of smog-forming emissions from this type of equipment has surpassed emissions from light-duty passenger cars and is projected to be nearly twice those of passenger cars by 2031. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.[13] Engines that use diesel fuel and engines that are used in stationary equipment, including standby generators, are not subject to the SORE regulations.

California Airborne Toxic Control Measures

As of December 2022, the ARB had developed 26 mobile and stationary source Airborne Toxic Control Measures (ATCMs).[14] The following summarizes the ATCMs that are potentially applicable for land use development projects such as logistics, warehouse, residential, mixed use, and retail development. Source and industry-specific requirements apply to industrial projects, gas stations, dry cleaners, and other types of facilities which are significant sources of TACs.

Asbestos ATCM

In July 2001, ARB approved an ATCM for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of Best Management Practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification, and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than 1 acre. These projects require the submittal of a "Dust Mitigation Plan" and approval by the ARB prior to the start of a project.

Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

[13] California Air Resources Board (ARB). 2021. Website: https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024. Accessed December 11, 2024.

[14] California Air Resources Board (ARB). 2023. Website: https://ww2.arb.ca.gov/resources/documents/airborne-toxic-control-measures. Accessed December 11, 2024.

Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found on or near the project site.[15]

Verified Diesel Emission Control Strategies

The EPA and the ARB tiered off-road emission standards only apply to new engines and off-road equipment can last several years. The ARB has developed Verified Diesel Emission Control Strategies (VDECS), which are devices, systems, or strategies used to achieve the highest level of pollution control from existing off-road vehicles, to help reduce emissions from existing engines. VDECS are designed primarily for the reduction of DPM emissions and have been verified by ARB. There are three levels of VDECS, the most effective of which is the Level 3 VDECS. Tier 4 engines are not required to install VDECS because they already meet the emissions standards for lower tiered equipment with installed controls.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Assembly Bill 2588), also known as the Hot Spots Act. To date, the ARB has identified more than 21 TACs, and has adopted the EPA's list of Hazardous Air Pollutants (HAPs) as TACs.

Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program), a partnership between the ARB and local air districts, issues grants to replace or retrofit older engines and equipment with engines and equipment that exceed current regulatory requirements to reduce air pollution. Money collected through the Carl Moyer Program complements California's regulatory program by providing incentives to effect early or extra emission reductions, especially from emission sources in environmental justice communities and areas disproportionately affected by air pollution. The program has established guidelines and criteria for the funding of emissions reduction projects. Within Butte County, BCAQMD administers the Carl Moyer Program. The program has established guidelines and criteria for the funding of emissions reduction projects and has established cost-effectiveness criteria for funding emission reductions projects, which under the final 2017 Carl Moyer Program Guidelines are $30,000 per weighted ton of NO_X, ROG, and PM.[16]

[15] United States Geological Survey (USGS). 2019. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in the Conterminous United States. Website: https://www.usgs.gov/data/reported-historic-asbestos-mines-historic-asbestos-prospects-and-other-natural-occurrences. Accessed December 11, 2024.

[16] California Air Resources Board (ARB). 2017. 2017 Carl Moyer Program Guidelines. Website: https://ww2.arb.ca.gov/our-work/programs/carl-moyer-memorial-air-quality-standards-attainment-program. Accessed December 11, 2024.

Regional

Butte County Air Quality Management District

The BCAQMD is the regulating authority for air quality in Butte County. The BCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality.

All projects in Butte County and in the City of Chico are subject to applicable BCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction resulting from implementation of the proposed project may include, but are not limited to, the following.

Rule 200 Nuisance. No person shall discharge from any non-vehicular source such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

Rule 201 Visible Emissions. No person shall discharge into the atmosphere from any single non-vehicular source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

- As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart as published by the U.S. Bureau of Mines; or,
- Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Section 1 of this Rule.

Rule 202, Particulate Matter Concentration: A person shall not discharge into the atmosphere from any source particulate matter in excess of 0.3 grains per cubic foot of gas at standard conditions.

When the source involves a combustion process, the concentration must be calculated to 12 percent CO_2. In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the CO_2 produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation of 12 percent of CO_2.

Rule 205 Fugitive Dust Emissions. The purpose of this rule is to reduce ambient concentrations and limit fugitive emissions of coarse particulate matter (PM_{10}) from construction activities, bulk material handling and storage, carryout and track-out and similar activities, weed abatement activities, unpaved parking lots, unpaved staging areas, unpaved roads, inactive disturbed land, disturbed open areas, and windblown dust.

Rule 207 Wood-Burning Devices. The purpose of this rule is to provide requirements related to sale, installation, operation and testing of wood-burning stoves in order to minimize air pollutant emissions.

Rule 230 Architectural Coatings. The purpose of this Rule is to limit the quantity of volatile organic compounds (VOCs) in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the District.

Rule 231 Cutback and Emulsified Asphalt. The purpose of this Rule is to limit emissions of VOCs from the use of cutback and emulsified asphalt in paving, construction, or maintenance of parking lots, driveways, streets, and highways.

Rule 400 Permit Requirements. The purpose of this rule is to require any person constructing, altering, or operating a source that emits or may emit air contaminants to request an Authority to Construct or Permit to Operate from the Air Pollution Control Officer and to provide an orderly procedure for application, review, and authorization of new sources and of the modification and operation of existing sources of air pollution. Stationary sources that are subject to Rule 1101—Title V-Federal Operating Permits—of these Rules and Regulations shall also comply with the procedures specified in this rule.

Rule 440 New Source Review. The purpose of this rule is to establish pre-construction review requirements for new and modified stationary sources of air pollution for use of Best Available Control Technology (BACT), offsets, and analysis of air quality impacts, and to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards and complies with all other applicable BCAQMD rules and regulations.

Air Quality Plans

The Air Pollution Control Districts and Air Quality Management Districts (Districts) for the counties located in the northern portion of the Sacramento Valley together establish the NSVPA. The NSVPA Counties of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba jointly prepared the Triennial Air Quality Attainment Plan (AQAP). The purpose of the plan is to achieve and maintain healthy air quality throughout the northern air basin. The plan addresses the progress made in implementing the original plan, submitted to ARB in 1991, and has been updated every three years, most recently in 2021, and was approved by the District Governing Board in April 2022. The AQAP includes control strategies necessary to attain the California ozone standard at the earliest practicable date.[17] Specifically, control measures were identified to address stationary sources and BCAQMD adopted rules such as Rule 400 and Rule 440 listed above. These rules require permitting and pre-construction review for constructing and operating stationary sources and require use of BACT, offsets, and analysis of air quality impacts. These rules ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards and complies with all other applicable BCAQMD rules and regulations. For non-stationary sources, the counties and NSVPA administer several grant programs that achieve emission reductions in addition to stationary source and area-wide control measures. These incentive programs are voluntary and often target mobile sources, which comprise the majority of the NO_x emission inventory yet which the Districts have no regulatory authority over. These programs include the Carl Moyer Program, which provides funding for cleaner-than-required engines, vehicle fee programs to reduce air

[17] Butte County. 2023. Butte County General Plan Update Draft EIR. January. Website: https://www.buttecounty.net/DocumentCenter/View/6522/ADEIR-Ch_05-03_AirQuality. Accessed October 9, 2024.

pollution from motor vehicles, and the Community Air Protection Program which addresses localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities.[18]

Local

City of Chico General Plan

The Chico 2030 General Plan establishes the following goals and policies relevant to air quality and greenhouse gas emissions:

Goal SUS-1 **Balance the environment, economy and social equity, as defined in the General Plan, to create a sustainable Chico.**

Policy SUS-1.1 **(General Plan Consistency):** Ensure proposed development projects, policies, and programs are consistent with the General Plan.

Goal SUS-4 **Promote green development.**

Policy SUS-4.2 **(Water Efficient Landscaping):** Promote drought-tolerant landscaping.

Policy SUS-4.3 **(Green Development Practices):** Promote green development practices in private projects.

Goal SUS-5 **Increase energy efficiency and reduce nonrenewable energy and resource consumption Citywide.**

Goal SUS-6 **Reduce the level of greenhouse gas emissions Citywide.**

Policy SUS-5.2 **(Energy Efficient Design):** Support the inclusion of energy efficient design and renewable energy technologies in public and private projects.

Policy SUS-6.3 **(Greenhouse Gas Emissions and CEQA):** Analyze and mitigate potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.

Policy SUS-6.4 **(Community Trees):** Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.

Goal CIRC-2 **Enhance and maintain mobility with a complete streets network for all modes of travel.**

Policy CIRC-2.1 **(Complete Streets):** Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities

[18] Sacramento Valley Air Quality Engineering and Enforcement Professionals (SVAQEEP). 2021. Northern Sacramento Valley Planning Area 2021 Triennial Air Quality Attainment Plan. Executive Summary. Website: https://www.airquality.org/SVBAPCC/Documents/Northern%20Sacramento%20Valley%20Air%20Quality%20Plan%202021.pdf. Accessed December 11, 2024.

to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.

Goal OS-4 **Improve air quality for a healthy City and region.**

Policy OS-4.1 **(Air Quality Standards):** Work to comply with State and federal ambient air quality standards and to meet mandated annual air quality reduction targets.

Policy OS-4.3 **(Greenhouse Gas Emissions):** Implement and periodically update the Climate Action Plan to achieve incremental greenhouse gas emissions reductions.

City of Chico Climate Action Plan and Climate Action Plan Update

Outlined in more detail in Section 03-08 (Greenhouse Gas Emissions), in 2011, the City adopted its Climate Action Plan (CAP) to reduce GHG emissions within the City in order to meet the State's goal of reducing GHG emissions 25 percent below the 2005 baseline levels by 2020. In 2021, the City adopted a CAP including an updated GHG emissions inventory and forecast. The CAP Update is intended to guide the City toward reducing GHG emissions consistent with the State goal to reduce GHG emissions 40 percent below 1990 levels by 2030, established by Senate Bill (SB) 32, and will make substantial progress toward meeting the State's long-term goal of carbon neutrality by 2045.

3.3.3 - Methodology

Approach to Analysis

Emission factors represent the emission rate of a pollutant over a given time or activity; for example, grams of NO_X per vehicle mile traveled (VMT) or grams of NO_X per horsepower hour of equipment operation. The ARB has published emission factors for on-road mobile vehicles/trucks in the Emission Factor (EMFAC) mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. Activity levels are a measure of how active a piece of equipment is operated and can be represented as the amount of material processed, elapsed time that a piece of equipment is in operation, horsepower of a piece of equipment used, or VMT per day. An air emissions model (or calculator) combines the equipment emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The CalEEMod (version 2022.1) was developed in collaboration with the South Coast Air Quality Management District (SCAQMD) and other air districts throughout the State. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with construction and operation from a variety of land uses.

The modeling analysis follows the BCAQMD guidance where applicable from the BCAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines. The models used in this analysis are summarized as follows:

- CalEEMod, Version 2022.1.1
- EMFAC2021 (v1.0.2) Emissions Inventory for on-road mobile sources[19]
- Vision Model [20] from 2020 Mobile Source Strategy for light-duty automobile (LDA), LDT1, LDT2 and medium-duty vehicle (MDV) future populations
- OFFROAD2021 (v1.0.5) Emissions Inventory for Construction and Mining including
  - Construction Equipment Updated in 2022. Reflects the 2022 Amendments to the Off-Road Regulation.[21]
  - Includes small off-road equipment less than 25 horsepower (hp) from SORE 2020. 2020 Small Off-Road Equipment Inventory.[22]
- EPA AERMOD dispersion model, Version 22112.
- ARB Hotspots Analysis and Reporting Program (HARP) Air Dispersion Modeling and Risk Tool.

Consistent with thresholds set forth in the BCAQMD CEQA Guidelines, the following criteria air pollutants and precursors are assessed in this analysis:

- Reactive organic gases (ROG)
- Nitrogen oxides (NO_X)
- Carbon monoxide (CO)
- Particulate matter less than 10 microns in diameter (PM_{10})

Note that the development of the proposed project would emit ozone precursors ROG and NO_X but would not directly emit ozone since it is formed in the atmosphere during the photochemical reactions of ozone precursors.

Construction-related Criteria Pollutants

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from both on-site and off-site activities. On-site emissions consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release ROG emissions. Off-site emissions result from motor vehicle exhaust from delivery vehicles, worker traffic and road dust (PM_{10} and $PM_{2.5}$).

[19] California Air Resources Board (ARB). EMFAC. Website: https://arb.ca.gov/emfac/. Accessed December 11, 2024.
[20] California Air Resources Board (ARB). 2020 Mobile Source Strategy Chapter 5 On-Road Light-Duty Vehicle Supporting Data. Website: https://ww2.arb.ca.gov/sites/default/files/2020-11/LDV_MSS_supporting_materials_ISAS_Nov2020.xlsx. Accessed October 9, 2024.
[21] California Air Resources Board (ARB). 2022. 2022 CARB Construction, Industrial, Mining and Oil Drilling Emissions Inventory. Website: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022InUseDieselInventory.pdf. Accessed October 9, 2024.
[22] California Air Resources Board (ARB). 2020. 2020 Emissions Model for Small Off-Road Engines – SORE2020. Website: https://ww2.arb.ca.gov/sites/default/files/2020-09/SORE2020_Technical_Documentation_2020_09_09_Final_Cleaned_ADA.pdf. Accessed October 9, 2024.

Schedule

The buildout potential of the proposed project is up to a maximum of 1,250 dwelling units and 210,000 square feet of commercial uses, as well as various off-site improvements, and publicly accessible, privately owned and maintained, park and public spaces and open space.

Based on information outlined in Section 2, Project Description, construction was assumed to occur over approximately 17 years, between 2024[23] and 2041.

The major construction activities associated with the development of residential and commercial land uses include site preparation, grading, building construction, architectural coatings and paving. These activities would occur sequentially as each project area is developed pursuant to applications for individual specific development proposals. Detailed estimates of the construction activities associated with each type of land use development are included in Appendix C. Other construction activities would include demolition of three existing accessory buildings (approximately 4,100 square feet total) and site clearing of approximately 6.79 acres of existing pavement. The demolition waste from the buildings and pavement would be an estimated 3,364 tons. Site development would also require the excavation and export of approximately 12,971 cubic yards (CY) of contaminated soil from approximately 7.5 acres of the BYSP area which would be backfilled with soil removal/cuts from the adjacent proposed stormwater basin. Excess soils from the stormwater basin excavation would be used to balance the project site.

The conceptual construction schedule for buildout of the proposed project is shown in Exhibit 2-10. For purposes of a conservative evaluation, the buildout schedule assumes construction of approximately 35 percent of the units to be built by 2028, 50 percent by 2030, 80 percent by 2034, and full buildout of all units by the end of 2041.

Construction emissions were calculated for the development and buildout of each of four land use types (single-family detached and attached, multi-family, and commercial). The modeling of construction emissions for the entire buildout is created from these building blocks (in other words, the five default scenarios as discussed below) based on the proposed buildout schedule. An additional construction scenario was also modeled to account for building demolition, pavement demolition/removal, contaminated soil removal and stormwater basin soil cut/removal that would occur during the initial stages of site construction.

Five default scenarios are based on a reasonable maximum quantity development of each land use type which would be expected in a single year, as follows:

- 50 single-family detached homes
- 50 single-family attached homes
- 100 multi-family units
- 65,000 square feet commercial development
- Initial sitewide demolition and soil removal

[23] To the extent construction starts later than 2024, this Draft EIR reflects a conservative analysis given that emissions would continue to decrease due to the more stringent regulatory framework that would govern.

Construction emissions from the land use default scenarios above were then scaled (up or down) to account for the development of each Planning Area[24] (as delineated in the air emissions modeling) based on its land uses (number of single-family vs. multi-family units or commercial square footage) and apportioned over the construction years assigned during which that planning year would be built. The demolition and soil removal were assumed to occur entirely within the initial year.

For example, for Planning Area 1, which is assumed for purposes of this analysis to accommodate 219 multi-family homes, the total construction emissions would be approximately 2.19 times the emissions predicted from the CalEEMod run that was based on 100 multi-family homes, then apportioned over years 2024–2027. Similarly, for Planning Area 2A, which is assumed for purposes of this analysis to accommodate 66 multi-family homes, the construction emissions would be based on the CalEEMod default run for 100 multi-family homes times a factor of 0.66.

The same approach is used for Planning Areas that would accommodate multiple land uses. For example, for Planning Area 6, which is assumed for purposes of this analysis to accommodate 42 single-family attached homes, 33 multi-family units, and 5,000 square feet of commercial, emissions from the CalEEMod runs for single-family attached homes, multi-family homes, and commercial development are scaled by 42/50, 33/100 and 5/65, respectively. These emissions are summed and apportioned over years 2026–2030.

Emissions related to demolition of the existing structures on-site, removal of pavement and removement/replacement of contaminated soil are assumed to occur in 2024 and the emissions are assigned to this single year.

Construction Equipment Tiers and Emission Factors

Construction equipment tiers refer to the generation of emission standards established by the EPA and the ARB that apply to off-road diesel equipment engines. The “tier” of an engine depends on the model year and horsepower rating; generally, the newer a piece of equipment is, the greater the tier it is likely to have and the lower the emission standards. Excluding engines greater than 750 horsepower, Tier 1 engines were manufactured generally between 1996 and 2003. Tier 2 engines were manufactured between 2001 and 2007. Tier 3 engines were manufactured between 2006 and 2011. Tier 4 engines are the newest and some incorporate hybrid electric technology; they were manufactured after 2007.

The 2022 amendments of the in-use off-road diesel fueled regulation target the phase-out of high-emitting Tier 0, 1, and 2 engines. Although these older engines only make up about one-third of the Statewide fleet, they account for a consequential 60 percent of oxides of nitrogen emissions Statewide. In fact, a single Tier 0 off-road engine has up to 80 times higher emissions per hour compared to a new Tier 4 Final engine. The implementation of the ARB In-Use Off-Road Diesel Fueled regulation results in construction equipment fleets that will become cleaner each year. The fleet make up and requirements vary across individual fleets as compliance is determined based on calculated fleet averages and the stringency depends on the size of the fleet.

[24] Planning Areas are used solely for purposes of completing the air quality modeling analysis and do not reflect a constraint on the particular sequence of ultimate build-out of the proposed project.

On-site Off-road Construction Equipment

Activity estimates for construction is modeled in CalEEMod utilizing built in default profiles of construction equipment used for a variety of land use construction projects that incorporate estimates of the equipment type, number of equipment, engine tier, hours per day, as well as horsepower and load factors. These equipment profiles were developed based on relevant construction surveys for several land use projects.

Engine tiers are specified as either "Average" or Tier-Specific (selected as Tier 1, 2, 3, 4 Interim, and 4-Final) based on Carl Moyer Controlled Off-Road Diesel Emission Factors. Default "Average" emission factors in CalEEMod 2022.1.1 were used for the unmitigated scenario. Emission factors for the controlled scenario were updated with OFFROAD2021 v.1.0.5 factors (which was updated by ARB in June 2023), assuming only Tier 3 or higher equipment from the inventory. The emission factors in OFFROAD2021 are based on the most recent 2022 In-Use Diesel Inventory[25] for off-road construction equipment.

The controlled equipment average emission factors were developed from OFFROAD for calendar year 2024 (the earliest year construction would be expected to occur) for construction (e.g., excavator, crawler tractors, cranes), industrial (e.g., aerial lifts, forklifts, other material handling equipment), and light commercial (e.g., air compressors, generator sets, pumps) equipment. The emission factors included model years corresponding to the introduction of Tier 3 equipment, depending on the horsepower bin. The first year for equipment model years included in the emission factors was 2008 for equipment less than 100 hp, 2007 for equipment from 100 to 175 hp and 2006 for equipment 175 hp and greater.[26] All mitigated (controlled) construction scenarios, regardless of buildout year, were based conservatively on emission factors for 2024 construction year as described above and representing a Statewide average of Tier 3, Tier 4 (interim and final) for each type and horsepower range. The updated OFFROAD2021 emission factors for construction calendar year 2024 are included in Appendix C.

The mitigated modeling assumed that all construction equipment utilized for the proposed project with engines greater than 50 hp would meet particular matter BACT standards, either as Tier 4 equipment or equivalent achieved by utilizing Tier 3 equipment with Level 3 VDECS (to achieve PM emission levels of 0.01 grams per brake-horsepower-hour (g/bhp-hr) or less). Emission factors for PM_{10} and $PM_{2.5}$ were also modified in the CalEEMod construction modeling to reflect this level of control. NO_x emission factors remained as the inventory average of Tier 3 and Tier 4 equipment so as to not underpredict NO_x emissions for cases where Tier 3 equipment controlled with Level 3 PM VDECs.

Site Preparation and Grading

During grading activities, fugitive dust can be generated from the movement of dirt within the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers

[25] California Air Resources Board (ARB). 2022. 2022 CARB Construction, Industrial, Mining and Oil Drilling Emissions Inventory. Website: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022InUseDieselInventory.pdf. Accessed October 9, 2024.

[26] California Air Resources Board (ARB). Nonroad Diesel Engine Certification Tier Chart. Website: https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart. Accessed October 9, 2024.

leveling the land, and loading or unloading dirt onto haul trucks. Each activity is calculated differently in CalEEMod, based on the number of acres traversed by the grading equipment.

Hauling would be required to export material to/from the project site. Based on available information and reasonable assumptions, this evaluation conservatively assumes that approximately 3,364 tons of debris from the demolition of existing buildings and roadway pavement would be generated and hauled off. Based on information on soil from the hazardous materials investigation, it is estimated that approximately 12,971 cubic yards of contaminated soil would be excavated and hauled off to landfills for disposal. This quantity would be a worst-case estimate that includes soil from Dump Areas 1–4 and additional excavation along the historical track spur rights-of-way.

Accordingly, the demolition phase is assumed to include approximately 42 one-way daily haul trips for the export of the demolition materials including pavement. The grading/excavation phase is assumed to include an average of 54 one-way daily trips for export of the excavated contaminated soil as described above. Cut and fill activities in later phases were assumed to balance on-site.

Off-site On-road Vehicle Trips

The CalEEMod model defaults trip length and vehicle fleet were used. The CalEEMod model run used the default worker trip length of 10.3 miles, the default vendor trip length of 4.5 miles. The default hauling trip length of 20 miles was used for demolition-related waste from the building and pavement removal. Contaminated soil hauling distances would vary depending on the nature of the contamination. For the worst-case arsenic-impacted waste soils, the anticipated haul route would be via State Route (SR) 99 to the Potrero Hills Landfill Facility at 3675 Potrero Hills Lane in Suisun City, Solano County, California, approximately 130 miles, one way. Lead impacted waste soils, (10,900 cy) would be hauled to the Chemical Waste Management, Inc. Disposal Facility at 17629 Cedar Springs Lane in Arlington, Oregon, approximately 521 miles one way. Emissions of criteria pollutants from the hauling of soils were calculate based on a 121 miles one-way haul distance which corresponds to the in-basin distance from the proposed site to the edge of the Sacramento Valley Air Basin. A summary of the proposed project's construction-related trips is included in Appendix C.

Off-Gassing Materials

Asphalt paving and architectural coating materials used during construction would generate off-gas emissions of ROGs. CalEEMod determines associated ROG emissions based on the amount of asphalt paving proposed. CalEEMod contains assumptions for application of architectural coatings that are based on the BCAQMD's coating regulations and use type and square footage of the buildings to be constructed and were used to quantify emissions.

Operation-related Criteria Pollutants

Several milestone operational years are analyzed, including year 2028, when approximately 35 percent of the units are conservatively assumed to be built and in operation; year 2030 (approximately 50 percent of units), year 2034 (approximately 80 percent); and year 2042 (approximately full buildout).

On-road Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project site. The emissions were estimated using CalEEMod utilizing trip generation rates for operations (ITE 11th Edition 2021) associated with the proposed project and obtained from the project traffic consultant Fehr & Peers. Trip rates were not adjusted to account for internal capture since plan-specific modeling was utilized for estimating residential daily VMT. However, pass-by trips were modeled for commercial trips to the retail plaza (40 percent) and restaurant (43 percent) consistent with data provided from the project traffic consultant. Also different from the trip generation, pass-by trips do not reduce the number of trips generated by the proposed project; rather, pass-by trips result in less vehicle miles traveled compared to primary trips. Accordingly, the trips used for emission modeling for the proposed project were taken as the gross trips presented in the traffic data, or approximately 16,905 daily trips.

Development under the proposed project would include design features, be located within an existing community, and locate housing next to jobs, all of which would reduce project vehicle miles traveled compared to default values. Accordingly, residential home to work (H-W) trip lengths were adjusted for each of the three residential land uses (Single-Family Attached, Single-Family Detached and Multi-family) to reflect the proposed project's per capita value of 11.5 VMT per day. Work-related employee trips also reflected the effective employee trip length of 2.5 VMT by setting the nonresidential H-W trip length as 2.5 miles per trip in CalEEMod.

The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the proposed project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline and diesel-powered vehicles). The fleet mix used for CalEEMod default fleet mix (for Butte County) was adjusted to reflect the relative proportions of vehicle classes that were tallied in the May 2022 traffic counts on neighborhood streets used for the traffic analysis (omitting the Park Avenue and E 20th Street mixes, as those streets carry different kinds of traffic) and was adjusted for project area-specific characteristics utilizing a traffic study of local streets (2022).

On-road mobile emission factors for passenger vehicles (vehicle Categories LDA, LDT1, LDT2 and MDV) were modified to incorporate off-model adjustments to account for promulgated regulatory measures not incorporated yet in the current version of EMFAC2021 v1.0.2 (i.e., Advanced Clean Cars II Regulations). On-Road Light-Duty Vehicle Populations were modified based on the MSS Vision light-duty vehicle (LDV) model[27] which was used to develop the regulatory strategies and reduction in the 2020 Mobile Source Strategy. The model assumes that conventional vehicle sales end in 2035, with ZEV and Plug-in hybrid electric vehicles sales reaching 100 percent by that date. New gasoline-only vehicles, including hybrids (non-plugged vehicles), are assumed to have reduced GHG emissions by 2 percent per year from 2026 to 2035. Battery electric vehicle and fuel cell electric vehicle new vehicle efficiency is assumed to improve at 0.5 percent per year from 2026 to 2045.

[27] California Air Resources Board (ARB). 2020 Mobile Source Strategy Chapter 5 On-Road Light-Duty Vehicle Supporting Data. Website: https://ww2.arb.ca.gov/sites/default/files/2020-11/LDV_MSS_supporting_materials_ISAS_Nov2020.xlsx. Accessed October 9, 2024.

Architectural Coatings

Paints release VOC/ROG emissions during application and drying. The buildings would be periodically repainted. The supplier that would likely serve the proposed project would be required to comply with the BCAQMD Rule 230—Architectural Coatings. This rule governs the manufacture, distribution, and sale of architectural coatings and limits the ROG content in paints and paint solvents.

Consumer Products

Consumer products include various solvents used in non-industrial applications, which emit VOCs during their product use. "Consumer Product" means a chemically formulated product used by household and institutional consumers, including but not limited to detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. It does not include other paint products, furniture coatings, or architectural coatings. The default emission factors developed for CalEEMod were used for consumer products associated with parking and park uses after reviewing the most recent 2019 VOC inventory,[28] which is consistent with the factor developed as a CalEEMod default.

Landscape Equipment

CalEEMod was used to estimate the changes in landscaping equipment emissions in the future due to phase in of zero-emission equipment from the implementation of SORE regulations. This was achieved by utilizing the default assumptions in the model but scaling to the landscaping days accordingly to account for the percentage of reductions. It was assumed that 50 percent of landscaping equipment would be zero-emission in 2028 and 95 percent by 2042. Supporting data for the SORE implementation are included with the CalEEMod results in Appendix C.

Electricity

Electricity usage (for lighting, etc.) would result in emissions from the power plants that would generate electricity distributed on the electrical power grid. Off-site electricity emission estimates are more pertinent for the analysis of GHG emissions. More detail describing assumptions used in estimating parameters specific to electricity is included in Section 3.7, Greenhouse Gas Emissions. PG&E's 2022 base plan is used to determine the percentage of electricity that would come from renewable sources, for years 2028, 2030, and 2034.[29] For buildout year 2042, PG&E would comply with SB 100 - The 100 Percent Clean Energy Act of 2018, and would supply electricity that is fully sourced from renewable resources.

Natural Gas

Emissions from this sector are principally from use of space and water heating. The estimated energy consumption is based on CalEEMod default values for the proposed land uses.

Construction- and Operation-related Toxic Air Contaminants

As noted above, TACs are air pollutants in minuscule amounts in the air that, if a person is exposed to them, could increase the chances of experiencing health problems. Exposures to TAC emissions

[28] California Air Resources Board (ARB). 2019. Survey Data Summary and Findings. April. Website: https://ww2.arb.ca.gov/sites/default/files/2020-06/survey-data-summary-and-findings-1.pdf. Accessed October 9, 2024.

[29] Pacific Gas and Electric Company (PG&E). 2022 Power Content Label. Website: https://www.energy.ca.gov/filebrowser/download/6048. Accessed October 9, 2024.

can have both chronic long-term (over a year or longer) and acute short-term (over a period of hours) health impacts. Construction-period TAC emissions could contribute to increased health risks to nearby residents or sensitive receptors.

An assessment was made of the potential health impacts to surrounding sensitive receptors resulting from TAC emissions during project construction. The TACs of greatest concern are those that cause serious health problems or affect many people. Health problems can include cancer, respiratory irritation, nervous system problems, and birth defects. Some health problems occur soon after a person inhales TACs. These immediate effects may be minor, such as watery eyes; or they may be serious, such as life-threatening lung damage. Other health problems may not appear until many months or years after a person's first exposure to the TAC. Cancer is one example of a delayed health problem.

Fine particle pollution or $PM_{2.5}$ describes particulate matter that is 2.5 micrometers in diameter and smaller—one-thirtieth the diameter of a human hair. Fine particle pollution can be emitted directly or formed secondarily in the atmosphere. $PM_{2.5}$ health impacts are important because their size can be deposited deeply in the lungs causing respiratory effects.

For purposes of this analysis, exhaust emissions of DPM are represented as exhaust emissions of PM_{10}. Studies indicate that DPM poses the greatest health risk among airborne TACs. A 10-year research program conducted by the ARB demonstrated that DPM from diesel fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic long-term health risk. DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although DPM is emitted by diesel fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

3.3.4 - Thresholds of Significance

The lead agency utilizes the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to air quality are significant environmental effects. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

c) Expose sensitive receptors to substantial pollutant concentrations?

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The preceding thresholds of significance are stated in general terms. It is therefore desirable to formulate additional, more precise quantitative thresholds, where feasible, based on guidance from the BCAQMD, as an expert in this field and consistent with Appendix G to the CEQA Guidelines. The appliable significance criteria established by BCAQMD to assist lead agencies in the review of projects under CEQA are discussed below. The City, in its discretion, has determined to utilize the BCAQMD significant criteria for purposes of this analysis. Additional guidance on the significance of air quality impacts is found in CEQA Guidelines Section 15065, subdivision (a)(4), which provides that a lead agency shall find that a project may have a significant effect on the environment if "the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly." According to the California Supreme Court, this "mandatory finding of significance" applies to potential effects on public health from environmental impacts such as those associated with air pollutant emissions from projects (*California Business Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 386-392).

Ambient Air Quality and Health Risk

Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. The BCAQMD has adopted the CEQA Air Quality Handbook in 2014, which contains thresholds of significance used to access air quality-related impacts from construction and operations of a project.[30] The Handbook was updated in 2024, but the air quality thresholds of significance remain the same. The quantitative air quality analysis provided herein applies the BCAQMD thresholds identified below to determine the potential for the proposed project to result in a significant air quality impact under CEQA. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3.3-7 are exceeded.

Table 3.3-7: BCAQMD Air Quality Thresholds of Significance

Criteria Pollutants Thresholds	
Pollutant	**Construction**
ROG	137 lbs/day or 4.5 tons/year
NO_X	137 lbs/day or 4.5 tons/year
PM < 10 microns (PM_{10} or smaller)	80 lbs/day
Pollutant	**Operational**
ROG	25 lbs/day
NO_x	25 lbs/day
PM	80 lbs/day

[30] Butte County Air Quality Management District (BCAQMD) . 2024. CEQA Air Quality Handbook – Guidelines for Assessing Air Quality and Greenhouse Gas Impacts for Projects Subject to CEQA Review. March 24.

Toxic Air Contaminants	
Pollutant	**Threshold**
TACs	Maximum incremental cancer risk ≥ 10 in 1 million Chronic and acute hazard index ≥ 1.0 Hazard Index Ambient Diesel $PM_{2.5}$ ≥ 0.3 ug/m^3 annual average

Notes:
BCAQMD = Butte County Air Quality Management District
ROG = reactive organic gases
NO_X = oxides of nitrogen
PM = particulate matter
TAC = toxic air contaminant
lbs/day = pounds per day
µg/m^3 = micrograms per cubic meter.
Source: Butte County Air Quality Management District (BCAQMD). 2024. CEQA Air Quality Handbook – Guidelines for Assessing Air Quality and Greenhouse Gas Impacts for Projects Subject to CEQA Review. March 24.

If a project were to exceed the emissions thresholds in Table 3.3-7, this would cumulatively contribute to the nonattainment status and would contribute to elevating health effects associated with these criteria air pollutants. In setting these thresholds, the BCAQMD specifically framed them as dealing with cumulative effects. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with PM include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions, generally, would further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions thresholds shown in Table 3.3-7, it is speculative to determine how exceeding regional thresholds would affect the number of days the region is in nonattainment—as mass emissions are not linearly correlated with concentrations of emissions—or how many additional individuals in the Air Basin would be affected by the health effects cited above.

In *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) Cal.5th 502, 510, 517–522, the California Supreme Court held generally that an EIR should "make[s] a reasonable effort to substantively connect a project's air quality impacts to likely health consequences." A possible example of such a connection would be to calculate a project's "impact on the days of nonattainment per year" (id. at pp. 521). But the court recognized that there might be scientific limitations on an agency's ability to make the connection between air pollutant emissions and public health consequences in a credible fashion, given limitations in technical methodologies (id. at pp. 520–521). Thus, the Court acknowledged that another option for an agency preparing an EIR might be "to explain why it was not feasible to provide an analysis that connected the air quality effects to human health consequences" (id. at p. 522).

Here, the BCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of emissions in the Air Basin. At present, the BCAQMD has not provided any methodology to assist local governments in reasonably and accurately assessing the specific connection between mass emissions of ozone precursors (e.g., ROG

and NO_X) and other pollutants of concern on a regional basis and any specific effects on public health or regional air quality concentrations that might result from such mass emissions. For this reason, and as explained more fully below, the City, in its discretion, has concluded that it is not feasible to predict how mass emissions of pollutants of regional concern from the proposed project could lead to specific public health consequences, changes in pollutant concentrations, or changes in the number of days for which the Air Basin will be in nonattainment for regional pollutants. Ozone concentrations, for instance, depend upon various complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations related to the NAAQS and CAAQS, it is not feasible, and thus would be speculative to attempt, to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare Air Quality Management Plans that detail regional programs to attain NAAQS and CAAQS. However, if a project within the BCAQMD exceeds the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the Air Basin.

It is, however, technically feasible to predict with reasonable accuracy the potential localized health consequences of localized pollutants such as TACs and $PM_{2.5}$. As discussed below, a Health Risk Assessment (HRA) that addresses the potential for additional incidences of cancer as well as a non-cancer hazard index resulting from both the construction-related emissions and the operational emissions of the proposed project has been prepared.

Odors

The City does not have any quantitative standards for evaluating potential odor impacts. The impact analysis qualitatively evaluates the types of land uses proposed to evaluate whether major sources of anticipated odors would be present as a result of the proposed project and, if so, whether those sources would likely generate objectionable odors. According to the BCAQMD's CEQA Air Quality Handbook, a project that involves the siting of a new odor source would consider the screening level distances and the complaint history of the odor sources, described below. Projects that would site a new odor source farther than the screening level distances provided in Table 3.3-8 would not likely result in a significant odor impact.

Table 3.3-8: BCAQMD Odor Screening level Distances

Land Use/Type of Operation	Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles

Land Use/Type of Operation	Screening Distance
Asphalt Batch Plant	2 miles
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	4 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	2 miles
Metal Smelting Plants	1 mile
Source: Butte County Air Quality Management District (BCAQMD). 2024. CEQA Air Quality Handbook – Guidelines for Assessing Air Quality and Greenhouse Gas Impacts for Projects Subject to CEQA Review. March 24.	

3.3.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

Consistency with Air Quality Management Plan

Impact AIR-1: The proposed project would conflict with or obstruct implementation of the applicable air quality plan.

As noted above, the BCAQMD, along with the other air districts in the region, prepared the NSVPA 2021 Triennial AQAP. The 2021 Plan addresses attainment of the CAAQS for ozone. The latest plan was adopted by the BCAQMD in coordination with the air quality management districts and air pollution control districts for the counties located in the northern portion of the Sacramento Valley including Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba counties, and incorporates land use assumptions and travel demand modeling provided by the Butte County Association of Governments (BCAG).

The purpose of a consistency finding is to determine whether a project is inconsistent with the policies and regulatory requirements promulgated under regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and State air quality standards. In general, projects are considered consistent with, and would not conflict with or obstruct implementation of the air quality plan if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the air quality management plan.

Implementation of the proposed project would result in a change in land use compared to existing conditions but would be consistent with the City's intent to develop the BYSP Area for a mix of commercial, residential, recreational, and open space uses. The City's 2030 General Plan designates

five new growth areas or special Planning Areas within the City's Sphere of Influence. The BYSP Area is designated in the General Plan as Special Planning Area 2 (SPA-2). The General Plan includes a conceptual land use plan for this area that includes a mix of residential commercial, and open space uses. The proposed project's land uses and development assumptions are generally consistent with the City's General Plan. The Specific Plan would implement the City's 2030 General Plan because it is in alignment with the guiding principles, goals, actions, and overall land use concept set forth in the General Plan. Therefore, the proposed project would not result in significant population growth that would substantially exceed BCAG growth projections for the County and would be consistent with the underlying regional plans used to develop the air quality management plan.

However, to address the criterion of whether the proposed project would exceed the BCAQMD significance thresholds for ozone precursors and potentially delay the timely attainment of the ambient air quality standards or interim emission reductions of the 2021 Plan, an air quality modeling estimate identified the proposed project's impact on air quality was performed and is discussed below. As discussed in detail in Impact AIR-2, the proposed project is estimated to result in long-term operational emissions that would exceed the respective project-level BCAQMD significance threshold for ROG (an ozone precursor), resulting in a potentially significant impact associated with the violation of an air quality standard. Despite implementation of MM AIR-2, it is likely that project-wide operational ROG emissions would still exceed project-level significance thresholds. It is assumed for the purposes of this analysis that exceeding the applicable project-level threshold for ozone precursors could increase the frequency or severity of existing air quality violations or cause or contribute to new violations, and the proposed project would therefore conflict with the 2021 AQAP. Such a conflict with the AQAP is considered a significant and unavoidable impact.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR-2.

Level of Significance After Mitigation

Significant and unavoidable impact.

Cumulative Criteria Pollutant Emissions Impacts

Impact AIR-2:	**The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.**

The cumulative air quality analysis prepared for the proposed project follows guidance from the BCAQMD CEQA Handbook, which states "Projects that do not exceed the Table ES-2 [Table 3.3-5 above] significance thresholds may be assumed to have a less than significant impact in regard to a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment."

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The Air Basin is in nonattainment for the State 24-hour standard for PM_{10}, State annual $PM_{2.5}$ standard, and State 1- and 8-hour ozone standards, as well as the federal 8-hour ozone standard. Therefore, if the proposed project would exceed the thresholds for $PM_{2.5}$, then it would contribute to a cumulatively considerable impact for those pollutants. If the proposed project would exceed the thresholds for NO_x or ROG, which are ozone precursors, then it follows that the proposed project would contribute to a cumulatively considerable impact for ozone.

This analysis assesses the effects of the proposed project's estimated criteria pollutant emissions in comparison to BCAQMD thresholds of significance for short-term construction activities and long-term operation of the proposed project. The primary pollutants of concern during project construction and operation are the ozone precursors (ROG, NO_x) and $PM_{2.5}$. The BCAQMD's CEQA Handbook has developed project level construction and operational thresholds for ROG, NO_x, and PM_{10} that can be utilized to determine whether a project may violate an air quality standard or contribute substantially to an existing air quality ozone precursors violation.

Construction Emissions

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from both on-site and off-site activities. On-site emissions consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil and demolition. Additionally, paving operations and the application of architectural coatings would release ROG emissions. Off-site emissions result from motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

Project construction activities were modeled using CalEEMod to determine the maximum daily emissions and annual emissions for comparison to the BCAQMD construction thresholds. As outlined in Section 3.3.3, emissions were based on OFFROAD emission factors for the earliest proposed year of construction (2024). Unmitigated emissions were based on State average values, and mitigated emissions were calculated assuming an inventory mix of Tier 3 and Tier 4 construction equipment and assuming that the equipment would meet BACT standards for DPM control. Consistent with this approach, MM AIR-1 would ensure that construction of future implementing projects would utilize off-road diesel equipment that meets the Tier 4 emission standards for all off-road equipment greater than 50 horsepower (or equipment that meets Tier 3 emissions and BACT standards if Tier 4 equipment is not available).

Table 3.3-9 presents the estimated unmitigated annual emissions of criteria pollutants based on the assumed development schedule. As shown in the table, the maximum annual emissions are approximately 5.35 tons for ROG, 5.13 tons for NO_x, and 0.47 tons for PM_{10}. This shows that the proposed project's maximum ROG and NO_x annual emissions for construction would exceed the significant thresholds set forth by the BCAQMD, and mitigation measures are proposed.

Table 3.3-9: Unmitigated Annual Construction Criteria Air Pollutants Emission Estimates based on Projected Buildout

Construction Year	Air Pollutants (tons per year) (approx.)		
	ROG	NO_x	PM_{10}
2024	5.38	4.83	0.55
2025	0.95	3.62	0.33
2026	1.34	5.13	0.48
2027	0.99	3.60	0.36
2028	1.19	4.45	0.44
2029	0.69	2.55	0.25
2030	1.02	3.58	0.36
2031	0.49	1.66	0.17
2032	0.49	1.66	0.17
2033	0.44	1.46	0.15
2034	0.34	1.31	0.13
2035	0.19	0.73	0.07
2036	0.67	2.59	0.25
2037	0.48	1.86	0.18
2038	0.48	1.86	0.18
2039	0.00	0.00	0.00
2040	0.17	0.68	0.07
2041	0.17	0.68	0.07
Maximum Annual	***5.38***	***5.13***	***0.55***
Significance Threshold	***4.5***	***4.5***	***—***
Significant Impact?	***Yes***	***Yes***	***—***

Notes:
ROG = reactive organic gases NO_x = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter

[1] The BCAQMD only provides a daily threshold for PM.
Source: FirstCarbon Solutions (FCS). Appendix C.

Table 3.3-10 shows the daily unmitigated construction emissions. Because the overlap and exact sequencing of the construction activities is unknown at this time, maximum daily emissions cannot be estimated. Instead, average daily emissions are calculated utilizing available information based on reasonable assumptions, by converting annual emissions into pounds and divided by the number of working days in a year (250 days). As shown below, the proposed project's unmitigated maximum

daily emissions for construction would not exceed the significant thresholds set forth by the BCAQMD.

Table 3.3-10: Unmitigated Daily Construction Criteria Air Pollutants Emission based on Projected Buildout

Construction Year	Air Pollutants (lbs per day) (approx.)		
	ROG	NO_x	PM_{10}
2024	43.0	38.6	4.4
2025	7.6	28.9	2.6
2026	10.7	41.1	3.8
2027	7.9	28.8	2.9
2028	9.5	35.6	3.5
2029	5.5	20.4	2.0
2030	8.2	28.7	2.9
2031	3.9	13.3	1.3
2033	3.5	11.7	1.2
2034	2.7	10.5	1.0
2035	1.5	5.9	0.6
2036	5.3	20.7	2.0
2037	3.8	14.9	1.4
2038	3.8	14.9	1.4
2039	0.0	0.0	0.0
2040	1.4	5.4	0.5
2041	1.4	5.4	0.5
Maximum	***42.8***	***41.1***	***3.8***
Significance Threshold	***137***	***137***	***80***
Significant Impact?	***No***	***No***	***No***

Notes:
NO_x = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
ROG = reactive organic gases
[1] The BCAQMD only provides a daily threshold for PM.
Source: FirstCarbon Solutions (FCS). Appendix C.

Table 3.3-11 presents the estimated annual mitigated emissions of criteria pollutants based on the assumed development schedule. As shown in the table, the maximum annual mitigated emissions are approximately 4.340 tons for ROG, 2.89 tons for NO_x, and 0.39 tons for PM_{10}. Therefore, with the

implementation of MM AIR-1, the proposed project's maximum annual emissions for construction would not exceed the significant thresholds set forth by the BCAQMD.

Table 3.3-11: Mitigated Annual Construction Criteria Air Pollutants Emission Estimates based on Projected Buildout

Construction Year	Air Pollutants (tons per year) (approx.)		
	ROG	NO_x	PM_{10}
2024	4.40	2.89	0.39
2025	0.81	2.25	0.21
2026	1.14	3.12	0.31
2027	0.85	2.15	0.24
2028	1.01	2.62	0.29
2029	0.58	1.50	0.17
2030	0.88	2.15	0.24
2031	0.43	1.01	0.11
2032	0.43	1.01	0.11
2033	0.39	0.89	0.10
2034	0.29	0.74	0.09
2035	0.16	0.41	0.05
2036	0.56	1.46	0.17
2037	0.40	1.04	0.12
2038	0.40	1.04	0.12
2039	0.00	0.00	0.00
2040	0.15	0.38	0.04
2041	0.15	0.38	0.04
Maximum Annual	***4.40***	***3.12***	***0.39***
Significance Threshold	***4.5***	***4.5***	***—***
Significant Impact?	No	No	—

Notes:
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
ROG = reactive organic gases NO_x = oxides of nitrogen

[1] The BCAQMD only provides a daily threshold for PM.
Source: FirstCarbon Solutions (FCS). Appendix C.

Table 3.3-12 shows the daily construction mitigated emissions. Because the overlap and exact sequencing of the construction activities is unknown at this time, daily emissions cannot be

estimated. Instead, average daily emissions are calculated utilizing available information based on reasonable assumptions, by converting annual emissions into pounds and divided by the number of working days in a year (250 days). As shown below, the proposed project's maximum daily mitigated emissions for construction would not exceed the significant thresholds set forth by the BCAQMD.

Table 3.3-12: Mitigated Daily Construction Criteria Air Pollutants Emission Based on Projected Buildout

Construction Year	Air Pollutants (lbs per day) (approx.)		
	ROG	NO_x	PM_{10}
2024	35.2	23.2	3.2
2025	6.5	18.0	1.7
2026	9.1	25.0	2.5
2027	6.8	17.2	1.9
2028	8.1	21.0	2.4
2029	4.7	12.0	1.4
2030	7.0	17.2	1.9
2031	3.4	8.1	0.9
2033	3.1	7.1	0.8
2034	2.3	5.9	0.7
2035	1.3	3.3	0.4
2036	4.5	11.6	1.4
2037	3.2	8.4	1.0
2038	3.2	8.4	1.0
2039	0.0	0.0	0.0
2040	1.2	3.0	0.4
2041	1.2	3.0	0.4
Maximum	***35.2***	***25.0***	***3.2***
Significance Threshold	***137***	***137***	***80***
Significant Impact?	No	No	No

Notes:
ROG = reactive organic gases NO_x = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter

[1] The BCAQMD only provides a daily threshold for PM.
Source: FirstCarbon Solutions (FCS). Appendix C.

As shown above, with the implementation of MM AIR-1, the estimated emissions for the proposed project's construction would not exceed BCAQMD's significance thresholds set forth for ROG, NO_x,

and PM_{10}. Therefore, construction impacts related to criteria pollutants are concluded to be less than significant with mitigation incorporated.

Operational Emissions

Operational emissions occur over the lifetime of a project and are generally from three main sources: area, mobile, and energy sources. Area sources represent the emissions from consumer products, periodic architectural repainting, and landscaping equipment. Mobile source emissions are primarily from passenger vehicle trips from residents of the proposed project and employees and visitors of the commercial and recreational/open space uses included in the Specific Plan. The modeling accounts for the average daily vehicle trips and VMT, energy usage, water demand, and wastewater and solid waste generated by the proposed project. Methodologies for estimating these emissions were summarized previously in Section 3.3.3. Energy emissions are typically represented by direct energy emissions from sources of space and water heating. For assumptions in estimating the emissions, please refer to Appendix C.

Because of Statewide measures and regulations to decarbonize and reach the Statewide goal of carbon neutrality by 2045, emissions from both mobile sources and landscaping equipment are projected to decrease significantly during the buildout of the proposed project. The project buildout in 2041 does not represent the maximum operational emissions year as interim year emissions have the potential to be higher. These interim years, while having fewer residents, would have higher emission rates for landscaping equipment and mobile sources (the populations of which are anticipated to shift over time to zero-emission vehicles and equipment progressively from 2026-2045 as a result of various regulations). Therefore, operational emissions were analyzed for buildout years of 2028, 2030, 2034 and 2041, which represent approximately 35, 50, 85, and 100 percent of the buildout as represented by completion of the residential dwelling units. For assumptions in estimating the emissions, please refer to Appendix C.

The summer maximum daily operational emissions have been analyzed for the three interim years and full buildout in 2041 and are shown in Table 3.3-13. As shown in Table 3.3-13, the operational emissions from the proposed project would emit ROG and NO_X emissions above the adopted BCAQMD significance threshold.

Table 3.3-13: Operational Criteria Air Pollutant–Summer Maximum Daily Emissions by Year

Source	Air Pollutants (Summer Maximum Daily Rates in pounds)		
	ROG	NO_X	PM_{10}
2028	50.04	26.17	23.92
2030	60.09	31.02	29.50
2034	68.43	35.17	36.73
2042	70.87	33.99	41.15
Significance Threshold[1]	25	25	80
Significant Impact?	**Yes**	**Yes**	**No**

Source	Air Pollutants (Summer Maximum Daily Rates in pounds)		
	ROG	NO_X	PM_{10}
Notes: NO_x = nitrogen oxides PM_{10} = particulate matter ROG = reactive organic gases [1] Emissions include Area source and mobile source emissions. Source: FirstCarbon Solutions (FCS). Appendix C			

In compliance with the CAP Measure E-2 and as a mitigation measure (MM ENER-1), the proposed project would be required to principally have an all-electric design. Therefore, Table 3.3-14 shows the proposed project's daily operational emissions for the three interim years and full buildout in 2042 without natural gas use, after implementation of MM ENER-1.

Table 3.3-14: Operational Criteria Air Pollutant–Summer Maximum Daily Emissions by Year (Incorporation of MM ENER-1)

Source	Air Pollutants (Summer Maximum Daily Rates in pounds)		
	ROG	NO_X	PM_{10}
2028	49.63	19.06	23.34
2030	59.45	20.10	28.62
2034	67.45	18.41	35.37
2042	69.66	13.34	39.48
Significance Threshold[1]	25	25	80
Significant Impact?	Yes	No	No
Notes: NO_x = nitrogen oxides PM_{10} = particulate matter ROG = reactive organic gases [1] Emissions include Area source and mobile source emissions. Source: FirstCarbon Solutions (FCS). Appendix C			

Table 3.3-15 shows the operational criteria air pollutant emissions by source in buildout year 2042, since the maximum level of ROG emission occurs at project buildout. The table shows that the most significant sources of ROG emissions are generated by consumer products and vehicle exhaust.

Table 3.3-15: Operational Criteria Air Pollutant Emissions by Source for Buildout Year 2042 (Incorporation of MM ENER-1)

Source	Air Pollutants (Summer Maximum Daily Rates in Pounds) (approx.)		
	ROG	NO_X	PM_{10}
Area–Consumer Products	41.86	—	—
Area–Architectural Coatings	3.24	—	—
Area–Landscaping	7.66	0.73	0.05
Mobile Sources–Vehicle Exhaust	16.75	10.09	0.13
Mobile Sources–Road Dust	—	—	39.10
Energy- Commercial	0.14	2.52	0.19
Total Daily Emissions	69.65	13.34	39.47
Significance Threshold	25	25	80
Significant Impact?	**Yes**	**No**	**No**

Notes:
ROG = reactive organic gases
NO_x = nitrogen oxides
PM_{10}
$PM_{2.5}$ = particulate matter

Area source emissions include emissions from consumer products, landscape, and painting.
Mobile sources consist of emissions from vehicles and road dust. Mobile Source emissions from CalEEMod and EMFAC 2021 utilize updated emission factors for Light-Duty Vehicles to incorporate Zero0Emission Vehicles (ZEVs) on the road from the Advanced Clean Cars 2 regulation.
Source: FirstCarbon Solutions (FCS). Appendix C

As discussed in Section 3.3.3, Methodology, consumer products are chemically formulated products used by household and institutional consumers, including but not limited to detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products.

Some options to reduce operational emissions of ROG[31] may include:

- Utilize only low ROG cleaning supplies (also known low VOC cleaning supplies) in perpetuity;
- Utilize only low ROG paint supplies (also known low VOC paint supplies) in perpetuity; and
- Utilize only electric landscaping equipment in perpetuity.

These options available to reduce the majority of ROG emissions caused by area sources during operations would require the use of restricted supplies and equipment by future occupants in perpetuity. Future occupants (including residents and workers) would have access to consumer

[31] It should be noted "ROG" and "VOC" are used interchangeably. ROG is being used to refer to the pollutant being emitted by the proposed project, consistent with the BCAQMD thresholds that the emissions were compared against. When considering options for mitigation measures, the more common terminology for lower emitting options is "VOC."

products available on the marketplace. Regulation of consumer products available on the marketplace is not within the control of any individual project applicant or lead agency. Therefore, requiring the use of only low ROG supplies and equipment in perpetuity is neither feasible nor enforceable.

The second main source of ROG comes from vehicle exhaust. Vehicles generate ROG through either evaporation or incomplete combustion of fuel. Most of the vehicles driven as a result of the proposed project are conservatively assumed to be private vehicles owned by future residents and workers. Similar to consumer products, regulation of private vehicles is not within the control of any individual project applicant or lead agency. Therefore, there is no feasible mitigation measure that can directly reduce this impact. However, the percentage of gasoline-fueled vehicles would drastically reduce as the State transitions to zero-emission vehicles pursuant to various laws and regulations within a robust regulatory framework. With the issuance of Executive Order N-79-20 and the subsequent adoption of the Advanced Clean Cars II regulation, the proportion of the passenger vehicle fleet that is electric and alternatively fueled is anticipated to increase with each passing year, with an estimated 77 percent of the on-road population being battery electric or plug-in hybrid technology by the project buildout in 2041. ROG emissions from mobile exhaust would continue to diminish over the years.

When there is no feasible mitigation available to directly reduce air emission impacts, the BCAQMD CEQA Handbook recommends that the project applicant (or developer) either establish an Off-site Mitigation Program within Butte County, coordinated through BCAQMD, or participate in an existing Off-site Mitigation Program by paying the equivalent amount of money equal to the project contribution of pollutants (ROG). MM AIR-2 would require the applicant for each individual specific development proposal within the BYSP Area that would result in project-wide emissions exceeding 25 pounds/day of ROG to participate in an Off-site Mitigation Program. However, although the Air District issues credits for criteria pollutant tonnage/year removed, future timing and success of the grant program cannot be guaranteed, and therefore, the impact is concluded to be significant and unavoidable even when mitigated to the extent feasible.

Level of Significance Before Mitigation

Construction

Potentially significant impact.

Operation

Potentially significant impact.

Mitigation Measures

Implement MM ENER-1 and:

MM AIR-1 Prior to issuance of subdivision improvement plans for each phase of construction within the project site, the developer shall provide to the City's Community Development Director, for City review and approval, reasonable documentation that demonstrates the use of construction equipment that meets or exceeds United States Environmental Protection Agency (EPA) or California Air Resources Board

(ARB) Tier 4 Final off-road emission standards for all off-road equipment with engines greater than 50 horsepower, if available. This requirement shall be included as construction notes on all relevant construction plans and permits (e.g., grading plan, building permit) for the subject specific individual development proposal. The relevant construction contractor shall maintain records concerning its efforts to comply with this requirement during construction, including equipment rental lists.

If Tier 4 equipment is not available, the subject applicant shall reasonably document to the City's Community Development Director the basis for its unavailability and instead shall ensure that all off-road diesel-powered equipment greater than 50 hp shall meet EPA Tier 3 emissions standards. All Tier 3 equipment shall be outfitted with Best Available Control Technology (BACT) devices including an ARB certified Level 3 Diesel Particulate Filter or equivalent.

MM AIR-2 **Purchase Offsets.** Prior to the City's approval of a final map for an application for a specific individual development proposal within the BYSP Area which would result in project-wide emissions exceeding 25 lbs/day of ROG, the subject project developer shall participate in an Off-site Mitigation Program, based on the Butte County Air Quality Management District (BCAQMD) CEQA Handbook, by paying the equivalent amount of money, which is equal to the contribution of pollutants (ROG) for the subject application which exceeds the BCAQMD thresholds of significance. Final details are to be approved by the BCAQMD and City for calculating the payments to the Off-site Mitigation Program due by each specific individual development proposal pursuant to this MM AIR-2.

Level of Significance After Mitigation

Construction

Less than significant impact.

Operation

Significant and unavoidable impact.

Sensitive Receptors Exposure to Pollutant Concentrations

Impact AIR-3: **The proposed project could expose sensitive receptors to substantial pollutant concentrations.**

This impact addresses whether implementation of the proposed project would expose air pollution sensitive receptors to TACs such as construction-related asbestos disturbance, construction-generated fugitive dust (PM_{10}), construction-generated DPM, operational-related TACs, or operational CO hotspots.

The closest off-site sensitive receptors consist of single-family homes bordering the BYSP Area predominantly to the north and east. Specifically, the closest off-site sensitive receptors consist of residences along Normal Avenue, Chestnut Street and at the westerly ends of West 14th Street through West 20th Street along the project's border.

Construction

Construction Fugitive Dust

Construction activities associated with development of the proposed project would include demolition, site preparation, grading, building construction, paving, and architectural coating. Generally, the most substantial air pollutant emissions would be dust generated from site grading. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants.

Fugitive dust consists primarily of PM_{10} particles. As discussed in Impact AIR-2, the proposed project would not exceed the construction threshold for PM_{10}. Furthermore, BCAQMD Rule 205 requires all construction or active operations[32] to implement the identified control measures to reduce fugitive dust.[33] While this impact is considered potentially significant, MM AIR-3 includes the fugitive dust control measures recommended by the BCAQMD, thereby reducing this impact to less than significant.

Construction Toxic Air Contaminants

A Health Risk Assessment (HRA) is a guide that helps to determine whether current or future exposures to a chemical or substance in the environment could affect the health of a population. In general, risk depends on the following factors:

- Identify the TACs that may be present in the air;
- Estimate the amount of TACs released from all sources, or the source of particular concern, using air samples or emission models;
- Estimate concentrations of TACs in air in the geographic area of concern by using dispersion models with information about emissions, source locations, weather, and other factors; and
- Estimate the number of people exposed to different concentrations of the TAC at different geographic locations.

During construction, the proposed project would result in the emissions of TACs that could potentially impact nearby sensitive receptors. TACs are the air pollutants of most concern as they relate to sensitive receptors, as they have the greatest potential to pose a carcinogenic and non-carcinogenic (such as asthma and bronchitis) hazard to human health. The BCAQMD has defined health risk significance thresholds as discussed under Section 3.3.4, Thresholds of Significance above. These thresholds are represented as a cancer risk to the public and a non-cancer hazard from exposures to TACs. Cancer risk represents the probability (in terms of risk per million individuals) that an individual would contract cancer resulting from exposure to TACs continuously over a period of several years. The health risks also include concentration levels of $PM_{2.5}$ and non-cancer hazards.

[32] Any operation capable of generating fugitive dust, including, but not limited to, earthmoving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

[33] Butte County Air Quality Management District (BCAQMD). Rule 205, Fugitive Dust Emissions. Website: https://ww2.arb.ca.gov/sites/default/files/classic/technology-clearinghouse/rules/RuleID467.pdf. Accessed October 9, 2024.

Construction DPM Emissions

DPM has been identified by the ARB as a carcinogenic substance. The principal TAC emission analyzed in this assessment was DPM from the operation of off-road equipment and diesel-powered delivery and worker vehicles during construction. For purposes of this analysis, DPM is represented as exhaust emissions of PM_{10}. As noted earlier, construction of the proposed project is assumed to commence as early as 2024 and conclude in 2041, spanning a period of approximately 17 years. Construction assumptions are summarized above under Section 3.3.3, Methodology.

Based on the analysis presented in this section, emissions were estimated based on a construction profile aligned with BACT for DPM as required under MM AIR-1. The construction fleet over these years would be represented by a Statewide average for the earliest construction calendar year 2024 based on OFFROAD2021 version 1.05, utilizing Statewide average for Tier 3 and newer equipment. The custom inventory was developed by including equipment for model years 2008 and newer for equipment 100 hp and smaller, model years 2007 newer for equipment between 101 and 175 horsepower and 2006 and newer for equipment between 176 to 600 horsepower. This approach removed older Tier 0, 1 and 2 contributions from the emission factors. These tiers will be phased out by regulation Statewide over the project buildout, and MM AIR-1 ensures that these older, more polluting tiers will not be used. The CalEEMod modeling assumed BACT PM controls consistent with regulatory requirements under the In-Use Diesel ATCM or Level 3 VDECS for equipment greater than 50 horsepower.

Total emissions of diesel exhaust particulate (as PM_{10} exhaust from diesel construction) from the entire buildout was estimated utilizing the CalEEMod results for each of the land use development types using the methodology outlined in Section 3.3.3 and used for calculating criteria pollutant emissions. Total construction emissions for the entire buildout of 17 years were estimated as 793.2 pounds of PM_{10} diesel exhaust. See Appendix C for more detail on this calculation.

Receptor locations within the AERMOD model were placed at locations of existing residences and schools surrounding the BYSP Area. To evaluate localized construction impacts, concentrations were calculated conservatively at ground level for the purposes of this analysis. The emissions from the on-site construction exhaust source were assumed to be emitted at a height of 5 meters above ground to account for the top of the equipment exhaust stack where the emissions are released to the atmosphere and the increase in the height of the emissions due to its heated exhaust. All off-site DPM emissions were conservatively included within the construction site emission source which is characterized by a polygon area source covering the entire BYSP Area. See Appendix C for detailed assumptions of the emissions and AERMOD model setup.

The buildout of the proposed project could also expose future sensitive receptors within the BYSP Area to substantial pollutant concentrations due to the overlap of occupancy and construction. Demolition and removal of existing pavement, removal of contaminated soil, development of specified commercial and recreational spaces, and the initial phase of residential development could occur within the first construction year and prior to move-in of the first occupants. Total construction emissions after the first year of construction was estimated to be 705 pounds of PM_{10} diesel

exhaust.[34] A conceptual HRA was developed to follow an individual hypothetical maximally exposed individual resident (MEIR) starting at third trimester through 9 years of development and exposure. A buildout rate of 10 acres per year was conservatively utilized in order to capture the more intensive development that would occur during the earlier buildout years. Emissions were apportioned accordingly as follows: 705 pounds of DPM/9 years/10 acre = 7.8 lb/acre-yr. The initial development was modeled as a construction area of 5 acres such that subsequent development would occur starting at a distance of 80 meters (in any direction). The MEIR is represented by a single receptor in the center of this initially developed construction area. The construction emissions were distributed over 2 donut shaped concentric areas of 20 acres and 70 acres and up to a distance of 350 meters from the receptor. This conceptual model represents the reasonable worst-case scenario regardless of the order or location of subsequent area construction. Details of the conceptual HRA describing the methodology as well as the AERMOD and HARP model inputs and outputs are included in Appendix C.

For both the off-site HRA and the on-site MEIR analysis, the construction emissions were assumed to be distributed over a working schedule of 8 hours per day and 5 days per week. Emissions modeled in HARP Air Dispersion Risk Tool for 8 hours each day, 5 days per weekday were adjusted by a factor of 4.2 to convert for use with a 24-hour-per-day averaging period. Emissions were modeled directly in AERMOD for the On-Site HRA for use with the HARP Risk Assessment Stand-Alone Tool, with emissions modeled only during the projected construction hours.

Estimation of Cancer Risks

The BCAQMD has developed a set of guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures to TACs. These adjustment factors include age-sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. Cancer risk represents the probability (in terms of risk per million individuals) that an individual would contract cancer resulting from exposure to TACs continuously over a period of several years. The principal TAC emission analyzed in this assessment was DPM from operation of off-road equipment and diesel fuel delivery and worker vehicles during construction and operation.

The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in a million implies a likelihood (or risk) that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer risk that is in addition to any environmental cancer risk borne by a person not exposed to these air toxins.

The California Office of Environmental Health Hazard Assessment (OEHHA) has developed guidance for estimating cancer risks that considers the increased sensitivity of infants and children to TAC. This guidance is applied in estimating cancer risks from the construction and operation of the proposed project. PM_{10} exhaust is modeled as the surrogate of DPM in the following analysis. As

[34] Total construction PM_{10} diesel exhaust emissions (793.2 pounds) minus first year of construction PM_{10} diesel exhaust emissions (67.9 pounds) = approximately 705 pounds of construction PM_{10} diesel exhaust emissions from second construction year through end of construction.

recommended by the ARB, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures.

Estimation of Non-cancer Chronic Hazards

An evaluation of potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate Reference Exposure Level (REL). Available RELs promulgated by OEHHA were considered in the assessment.

Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the subject project's emissions to a concentration considered acceptable to public health professionals, termed the REL.

The HI assumes that chronic exposures to TACs adversely affect a specific organ or organ system (toxicological endpoint) of the body. For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the HI, each chemical concentration or dose is divided by the appropriate toxicity REL. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist. OEHHA has defined a REL for DPM of 5 $\mu g/m^3$. The principal toxicological endpoint is the respiratory system, via the inhalation pathway.

Air Dispersion Modeling Results and Parameters

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the AERMOD version 22112 air dispersion model that is approved by the BCAQMD for performing air dispersion impact assessments. Specifically, the AERMOD model was used to estimate levels of air emissions at sensitive receptor locations from the project construction DPM (as PM_{10} exhaust) emissions. The use of the AERMOD model provides a refined methodology for estimating construction impacts by utilizing long-term, measured representative meteorological data and a representative construction schedule.

Terrain elevations were obtained using the EPA Terrain Preprocessor (AERMAP) model, the AERMOD terrain data preprocessor. The urban dispersion option was used to describe the air dispersion in the local vicinity of the BYSP Area. The air dispersion model assessment used meteorological data from the Chico Airport station, which is approximately 5 miles northwest of the Planning Area.

The estimated health and hazard impacts from construction emissions at the Off-Site and On-Site MEIR are provided in Table 3.3-16. The table shows that with MM AIR-1 which requires either Tier 4 equipment or, if unavailable, Tier 3 equipment with Level 3 VDECs, that cancer risk to off-site workers would be less than 10 in 1 million excess cancer risks and health risks would be less than significant.

Concentrations and health effects for future on-site residents were calculated from outdoor ambient concentrations, as well as for indoor ambient concentration based on Minimum Efficiency Reporting

Values (MERV)-13 efficiency Heating, Ventilation, and Air Conditioning (HVAC). This is based on the fact that future on-site residences would be new construction subject to the latest version of the California Building Code which requires HVAC with MERV-13 filters or more efficient. MERV-13 filters would trap particles at an efficiency rate of at least 80 percent, substantially reducing impacts from TACs for future residents included as part of the proposed project. This would significantly reduce the maximum predicted risk from 8.97 to 1.79 in a million.

Table 3.3-16: Proposed Project Construction Health Risks and Hazards

Scenario	Age Group	Maximum DPM Concentration ($\mu g/m^3$)	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[2]
Off-site MEIR[1] (unmitigated)	Infant-18 years	0.021355	15.2	0.004
On-site MEIR (without MERV-13 Filters)	Infant–9 years	0.02325	8.97	0.005
BCAQMD Significance Threshold			**10**	**1.0**
Exceeds BCAQMD Threshold?			**Yes**	**No**
Off-site MEIR[1] (mitigated)	Infant-18 years	0.00438	3.11	0.001
On-site MEIR (with MERV-13 Filters)	Infant–9 years	0.00465	1.79	0.001
BCAQMD Significance Threshold			**10**	**1.0**
Exceeds BCAQMD Threshold?			**No**	**No**

Notes:
$\mu g/m^3$ = micrograms per cubic meter
MEIR = Maximally Exposed Individual Resident
[1] The closest off-site air pollution sensitive receptors near the BYSP Area include residences located in a neighborhood directly adjacent to the project site to the north.
[2] Chronic non-cancer hazard index was estimated by dividing the annual average DPM concentration (as PM_{10} exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix C.

As shown in Table 3.3-16, the installation and maintenance of filters meeting the MERV-13 standard (as required under applicable laws and regulations) would ensure that impacts to future residents within the BYSP Area from DPM emissions from surrounding construction activities are less than significant. For the reasons set forth above, construction of the proposed project would not exceed the applicable BCAQMD thresholds for cancer risk and chronic non-cancer Health Index for existing off-site sensitive receptors or for future on-site sensitive receptors. Impacts would be less than significant.

Operational Toxic Air Contaminants

Project Operations as Toxic Air Contaminants Generator

Specific land uses included in the proposed Specific Plan include up to a maximum of 1,250 dwelling units, a maximum of 210,000 square feet of commercial uses and park and public recreational and open space uses. Unlike warehouses or distribution centers, the daily vehicle trips generated by development under the proposed project would be primarily generated by passenger vehicles.

Passenger vehicles typically use gasoline engines rather than the diesel engines that are found in heavy-duty trucks. Gasoline-powered vehicles do emit TACs in the form of toxic organic gases, some of which are carcinogenic. However, compared to the combustion of diesel, the combustion of gasoline has relatively low emissions of DPM. Therefore, implementation of the proposed project would not result in significant health impacts during operation.

ARB Air Quality and Land Use Handbook Recommendations

The ARB Air Quality and Land Use Handbook (2005) contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution," including recommendations for distances between sensitive receptors and certain land uses. In the *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) (Case No. S213478) the California Supreme Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions." Although the Court ruled that impacts from the existing environment on projects are not required to be addressed under CEQA, land uses such as gasoline stations, dry cleaners, distribution centers, and auto body shops can expose residents to high levels of TAC emissions if they are in proximity of the project site. Given that the proposed project does not involve risks of exacerbating existing environmental hazards or conditions related to air quality impacts, information regarding the location of existing TAC sources is provided for disclosure purposes only and not as a measure of the proposed project's significance under CEQA.

Consistency with these recommendations is assessed as follows:

- **Heavily traveled roads.** The ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. There is no roadway that would be capable of accommodating 100,000 vehicles per day that are within 500 feet of the project boundary. The nearest heavily traveled roadway is Park Avenue, approximately 1,500 north of the project boundary.[35] Park Avenue would have a forecasted average daily traffic of 21,730 vehicles in 2035.[36] Therefore, the proposed project would not locate sensitive receptors to a source of TACs closer than what is recommended by ARB.
- **Distribution centers.** The ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The proposed project would not be located within 1,000 feet of a distribution center.

[35] City of Chico. 24-Hour Traffic Counts Analytics. Website: https://trafficguru.us/24Hour/CityofChico. Accessed December 11, 2024.
[36] Ibid.

- **Fueling stations.** The ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). ARB recommends a 50-foot separation is recommended for typical gas dispensing facilities. The nearest gas station is located more than 2,400 feet northeast of the proposed project.
- **Dry cleaning operations.** The ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry cleaning operation that uses perchloroethylene. For operations with two or more machines, the ARB recommends a buffer of 500 feet. For operations with three or more machines, the ARB recommends consultation with the local air district. The nearest dry cleaning operation is located more than 3,000 feet northwest of the proposed project.
- **Auto body shops.** Auto body shops have the potential to emit TACs related to painting. The nearest auto body shop is located approximately 1,300 feet northeast of the proposed project, which is beyond the distance that would result in a measurable impact.

In summary, the proposed project would meet the recommended buffer distances between sensitive receptor land uses and TAC-generating land uses for all sources of TACs identified in the ARB Air Quality and Land Use Handbook.

Operational CO Hotspots

Localized high levels of CO (CO hotspots) are associated with traffic congestion and idling or slow-moving vehicles. BCAQMD previously included guidelines and a threshold of significance to evaluate CO hotspots in its 2008 Handbook and excluded them in the 2014 Handbook, which is the latest and most current version. However, according to other air district CO hotspot screening thresholds, peak-hour traffic volumes would need to be high to potentially create a significant CO hotspot impact. The BCAQMD recommends a screening analysis to determine whether a project's operation has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is not necessary. Implementation of the proposed project would result in a less than significant impact related to air quality for local CO if the following screening criteria are met:

- **Screening Criterion 1**: The proposed project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- **Screening Criterion 2:** Traffic associated with the proposed project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- **Screening Criterion 3:** Traffic associated with the proposed project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

In accordance with SB 743, transportation analysis under CEQA no longer uses delay-based metrics such as congestion to analyze project impacts. As detailed in Section 3.16, Transportation, the proposed project would have a less than significant VMT impact with travel demand management measures incorporated. Therefore, the proposed project would not conflict with a program, plan,

ordinance, or policy of the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

There is no nearby roadway that would be capable of accommodating 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. The nearest heavily traveled roadway is Park Avenue, approximately 1,500 feet north of the project boundary.[37] Park Avenue would have a forecasted average daily traffic of approximately 21,730 vehicles in 2035.[38] The peak-hour traffic volume would be only a fraction of average daily volume. This level of peak-hour trips is substantially less than the BCAQMD's second and third screening criteria of 44,000 vehicles per hour and 24,000 vehicles per hour respectively. Implementation of the proposed project would not result in an increase of traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not increase traffic volumes at affected intersections to more than 24,000 where vertical or horizontal mixing is substantially limited. Therefore, based on the above criteria, the proposed project would not exceed the CO screening criteria and would have a less than significant impact related to CO.

In summary, the proposed project would not expose sensitive receptors to substantial pollutant concentrations during construction. As discussed above, BCAQMD requires implementation of BMPs related to fugitive dust, which have been incorporated as MM AIR-3 as further assurance to ensure enforceability. The proposed project also would not expose sensitive receptors to substantial pollutant concentrations during operation such as generating TACs, siting sensitive receptors in vicinity of land uses that release TACs, thereby exacerbating an existing condition, or contributing to a CO hotspot. With the implementation of MM AIR-1 and MM AIR-3, operational impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM AIR-1

MM AIR-3 Implement BCAQMD Best Management Practices During Construction

The following Best Management Practices (BMPs), as recommended by the Butte County Air Quality Management District (BCAQMD), shall be included in the design of all development contemplated by the proposed project and implemented during all construction:

- Reduce the amount of the disturbed area where possible.
- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind

[37] City of Chico. 24-Hour Traffic Counts Analytics. Website: https://trafficguru.us/24Hour/CityofChico. Accessed December 11, 2024.
[38] Ibid.

speeds exceed 15 miles per hour (mph). Reclaimed (nonpotable) water should be used whenever possible.

- All dirt stockpile areas should be sprayed daily as needed, covered, or a District approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil-disturbing activities.
- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the District.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- Post a sign in a prominent location visible to the public with the telephone numbers of the contractor and District for any questions or concerns about dust from the project.
- All fugitive dust mitigation measures required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.

Level of Significance After Mitigation

Less than significant impact.

Objectionable Odors Exposure

Impact AIR-4:	**The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

The occurrence and severity of potential odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receiving location. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during proposed project construction. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant.

Typical sources of substantial operational odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and refineries which are not applicable to this project. Regarding operations, the proposed project would involve development of commercial and public (recreational/open space) facilities (nonresidential) and various types of housing (residential) uses. Typical odors generated from operation of the proposed project would include vehicle exhaust generated by residents, employees, and visitors traveling to and from the project site, through the periodic use of landscaping or maintenance equipment, odors from restaurants and from the temporary storage of typical solid waste (refuse). Accordingly, it is reasonable to conclude that any odors produced would be minimal and would be confined to the immediate vicinity. Overall, the operation of the proposed project would not result in odors that would affect a substantial number of people and this impact would be less than significant.

Level of Significance

Less than significant impact.

3.3.6 - Cumulative Impacts

Air quality is impacted by topography, dominant air flows, atmospheric inversions, location, and season; therefore, the Air Basin represents the area most likely to be impacted by air emissions. This analysis evaluates whether impacts of the proposed project, together with impacts of cumulative development, would result in a cumulatively significant impact with respect to air quality. This analysis then considers whether the incremental contribution of the impacts associated with implementation of the proposed project would be significant. Both conditions must apply for cumulative effects to rise to the level of significance.

The cumulative context of an air pollutant is dependent on the specific pollutant being considered. Ozone precursors are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire Air Basin. This means that ozone precursors generated in one location do not necessarily have ozone impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the Air Basin. Consequently, all ozone precursors generated throughout the Air Basin are part of the cumulative context.

The geographic scope for the proposed project's cumulative analysis includes the City of Chico and surrounding areas within the Air Basin for ozone. The Air Basin includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and portions of Solano and Placer counties. The Air Basin extends from south of Sacramento to north of Redding and is bounded on the west by the Coast Ranges and on the north and east by the Cascade Range and the Sierra Nevada.

The Air Basin is currently in nonattainment of the federal and State standards for ozone and the State standards for $PM_{2.5}$ but in attainment for all federal PM standards. Therefore, there is an existing cumulatively significant air quality impact with respect to these pollutants. Moreover, the Air Basin is anticipated to continue to be nonattainment for these pollutants and, thus, this cumulatively significant impact would likely continue to exist in the future. The proposed project would result in new air emissions during construction and operations and therefore would contribute to this impact. However, the proposed project would not result in unplanned population growth or subsequent emissions generation exceeding what was considered in the 2021 Plan, which is the region's strategy for achieving attainment status for these standards. As such, the proposed project's incremental contribution would not have a significant cumulatively considerable contribution to this existing significant cumulative air quality impact.

Similar to the proposed project is built out, other cumulative projects would be subject to CEQA and would require air quality analysis and, where necessary, mitigation if the cumulative project would exceed BCAQMD thresholds. Criteria air pollutant emissions associated with construction activity of cumulative projects would be reduced through implementation of control measures required by the BCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all cumulative projects would be subject to BCAQMD Rules 200 (Nuisance) and 205 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the BCAQMD. In addition, cumulative ROG emissions would be subject to BCAQMD Rules 230 (Architectural Coatings) and 231 (Cutback and Emulsified Asphalt).

However, as presented in Table 3.3-9, the proposed project would result in the exceedance of the ROG operational BCAQMD significance thresholds; as a result, the proposed project could potentially result in a cumulatively considerable contribution to regional ozone concentrations or other criteria pollutant emissions. Therefore, mitigation is proposed requiring the implementation of measures to reduce criteria pollutant emissions (i.e., ozone precursors) to below BCAQMD thresholds. However, this impact would remain significant and unavoidable. Note that the proposed project would not have significant particulate matter emissions and, thus, would not contribute to the existing nonattainment status for $PM_{2.5}$.

For purposes of potential health risk impacts, the appropriate geographic scope is 1,000 feet of project boundary as recommended by BCAQMD guidance. TAC risks decreases when distance is increased between the source of air pollution and sensitive land uses. Beyond 1,000 feet, any potential health risks would be minimal. Therefore, these projects would not contribute to a cumulatively significant health risk impact. In terms of the proposed project's contribution to the foregoing impact, as provided in the on-site and off-site HRA, cumulative cancer, non-cancer chronic hazard, and PM_{10} concentrations were evaluated at the most impacted sensitive receptor from all sources of TAC emissions located within 1,000 feet of the project site, including DPM emissions

resulting from project construction. The proposed project's individual incremental contribution to cancer risk would be below the BCAQMD's community significance threshold for determining cumulative TAC risk after implementation of mitigation; therefore, the proposed project would not result in a cumulatively considerable contribution to TAC cancer risk with mitigation.

For purposes of potential local CO hotspots, the appropriate geographic scope is 1,000 feet from project boundary similar to other TACs. Cumulative development would not be located within 1,000 feet of the proposed project. In terms of the proposed project's contribution to the foregoing impact, as discussed above, it would not exceed any of the screening criteria and thus would not have a cumulatively considerable contribution to this less than significant cumulative impact.

Cumulative localized impacts could potentially occur if a construction project were to occur concurrently with another off-site project. For the purposes of this analysis, it is assumed that construction schedules for cumulative projects would not overlap. The same is true for odors from a construction impact standpoint. The proposed project would not generate nuisance operational odors. Typically, odors are confined to areas around the source and would not combine with other odor sources creating a cumulative impact. Therefore, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative odor impact.

Level of Cumulative Significance Before Mitigation

Potentially significant impact.

Cumulative Mitigation Measures

Implement MM AIR-1, MM AIR-2, MM AIR-3, and MM ENER-1.

Level of Cumulative Significance After Mitigation

Significant and unavoidable impact with respect to operational criteria air pollutants.

Less than significant cumulative impact for all other impact areas.

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3.4 - Biological Resources

3.4.1 - Introduction

This section describes the existing biological resources conditions within the project Study Area and in the vicinity, as well as the relevant regulatory framework. The Study Area for the purposes of analyzing biological resource impacts consists of the Barber Yard Specific Plan (BYSP) Area and the Southern Study Area, which includes the off-site improvement area (approximately 16 acres), plus addition surrounding acreage that may contain biological resources which could be affected by the proposed project, including both stormwater outfall alignment options. As such, the approximately 133-acre BYSP Area and 21.5-acre Southern Study Area, includes a cumulative total of approximately 154.5 acres covered by this Biological Resources section. The following public comments were received during the Notice of Preparation (NOP) scoping period related to Biological Resources:

- Request to assess all habitat types within the project footprint, with a map locating each habitat type.
- Request to include a general biological inventory of all animal species that are present or have potential to be present within each habitat on-site and within adjacent areas.
- Request to include a complete recent inventory of rare threatened, endangered, and other sensitive species located within the project footprint and within off-site areas with the potential to be affected.
- Request to include a thorough, recent floristic based assessment of special-status plants and natural communities that follow California Department of Fish and Wildlife (CDFW) protocols.
- Inclusion of the regional setting of the project site.
- Request for the analysis of direct, indirect, and cumulative impacts to biological resources.
- Recommendations for mitigation measures for project impacts to biological resources.
- Information on Incidental Take Permits (ITP), Native Plant Protection Act (NPPA), and Lake and Streambed Alteration Program.

The proposed project consists of the full buildout of the BYSP, including off-site improvements, resulting in a mixed-use community accommodating a diverse range of housing opportunities with a mix of commercial, recreational and office uses located throughout. The overall construction timeline for the proposed project is expected to occur over 17 years, between 2024 and 2041 in accordance with the preliminary development schedule illustrated in Exhibit 2-10. However, due to market fluctuations over time as well as other factors, it is impossible to predict with precision the exact timing for buildout.

The proposed project's draft preliminary development schedule does not include construction "phases;" however, for the purposes of conservative analysis, and based on information available at the time of preparation of this Draft Environmental Impact Report (Draft EIR), it is anticipated that any necessary demolition and/or soil hauling would occur within the first 2 years of development (between 2024 and 2025) and the majority of construction would occur within the first 10 years of

development. It is also assumed that the Social Hub would be constructed in the first year of development.

This section evaluates the potential impacts related to biological resources that could result from implementation of the proposed project and feasible mitigation measures to reduce potential impacts to a less than significant level. Because of the proposed project's differing timelines of development by location, mitigation measures in this Section are recommended by location. Information in this section is based, in part, on on-site reconnaissance surveys of the Study Area that included a Biological Resources Assessment (BRA), which can be found in Appendix D.1

The purpose of the BRA and this Section 3.4 is to (1) document existing and potentially occurring biological resources on the project site and in the vicinity; (2) analyze potential project-related impacts on identified biological resources; (3) summarize relevant local, State, and federal laws and regulations; and (4) recommend feasible measures to mitigate potential impacts on biological resources to less than significant levels.

3.4.2 - Environmental Setting

The Study Area is generally located on the southern boundary of the City of Chico (with a small portion in unincorporated Butte County), where commercial and residential use intersperses with active agricultural and fallow areas. The Study Area is surrounded by residential and industrial uses and associated roadways to the north and east and open agricultural fields to the south and west.

Topography and Hydrology

The Study Area lies at approximately 194 feet above sea level in elevation. The Study Area and vicinity are generally flat, which is typical for the developed areas within the City of Chico. The project site drains to the southwest into Comanche Creek, which flows through the southern corner of the Study Area.

Soils

The United States Department of Agricultures (USDA) Natural Resources Conservation Service (NRCS) indicates that the soils within the Study Area consist entirely of Chico loam (445). This soil type and its primary characteristics are summarized in Table 3.4-1.

Table 3.4-1: Soil Types Present within Study Area

Soil Name	Symbol	Slope	Description	BYSP Area Acreage (approx.)	Southern Study Area Improvement Acreage (approx.)
Chico loam	445	0—2%	Loamy alluvium derived from igneous, metamorphic and sedimentary rock. Well drained, non-saline soil with no flooding or ponding frequency.	133	21.5

Soil Name	Symbol	Slope	Description	BYSP Area Acreage (approx.)	Southern Study Area Improvement Acreage (approx.)
Source: United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). 2021. Official Soil Series Descriptions. Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed December 11, 2024.					

Vegetation Communities and Land Cover Types

The following section describes the vegetation communities and land cover types present within the Study Area. The vegetation communities and land cover types are bifurcated between the BYSP Area and the Southern Study Area. The location and extent of each vegetation community is shown on Exhibit 3.4-1.

BYSP Area

Ruderal/Disturbed (BYSP Area)—Approximately 68.4 Acres

The central portion of the BYSP Area can be best described as ruderal/disturbed habitat. Ruderal/disturbed habitat is classified as areas that have been physically disturbed by previous legal human activity, and which are no longer recognizable as a native or naturalized vegetation association, but which continue to retain a soil substrate. Vegetation, if present, is typically composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance. Vegetation that was observed within the BYSP Area consist of yellow star thistle (*Centaurea solstitialis*), panicled willow herb (*Epilobium brachycarpum*), turkey mullein (*Croton setigerus*), milk thistle (*Silybum marianum*), wild oat (*Avena fatua*), curly dock (*Rumex crispus*), black mustard (*Brassica nigra*), Johnson grass (*Sorghum halepense*), field bindweed (*Convolvulus arvensis*), bull thistle (*Cirsium vulgare*), chicory (*Cichorium intybus*), redstem filaree (*Erodium cicutarium*), ripgut brome (*Bromus diandrus*), and burr clover (*Medicago polymorpha*), among others. One small elderberry shrub with a diameter at breast height (DBH) of 6 inches (ELD #1) was identified within a remnant manufactured ditch, as depicted in the Arborist Survey Report (Appendix D.2). This shrub is discussed in further detail below in relation to potential habitat for the valley elderberry longhorn beetle (VELB).

Examples of disturbed land include areas that have been graded or repeatedly cleared for fuel management purposes, as well as areas that have experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old home-sites. This portion of the BYSP Area contains dirt and concrete roads connecting abandoned developments.

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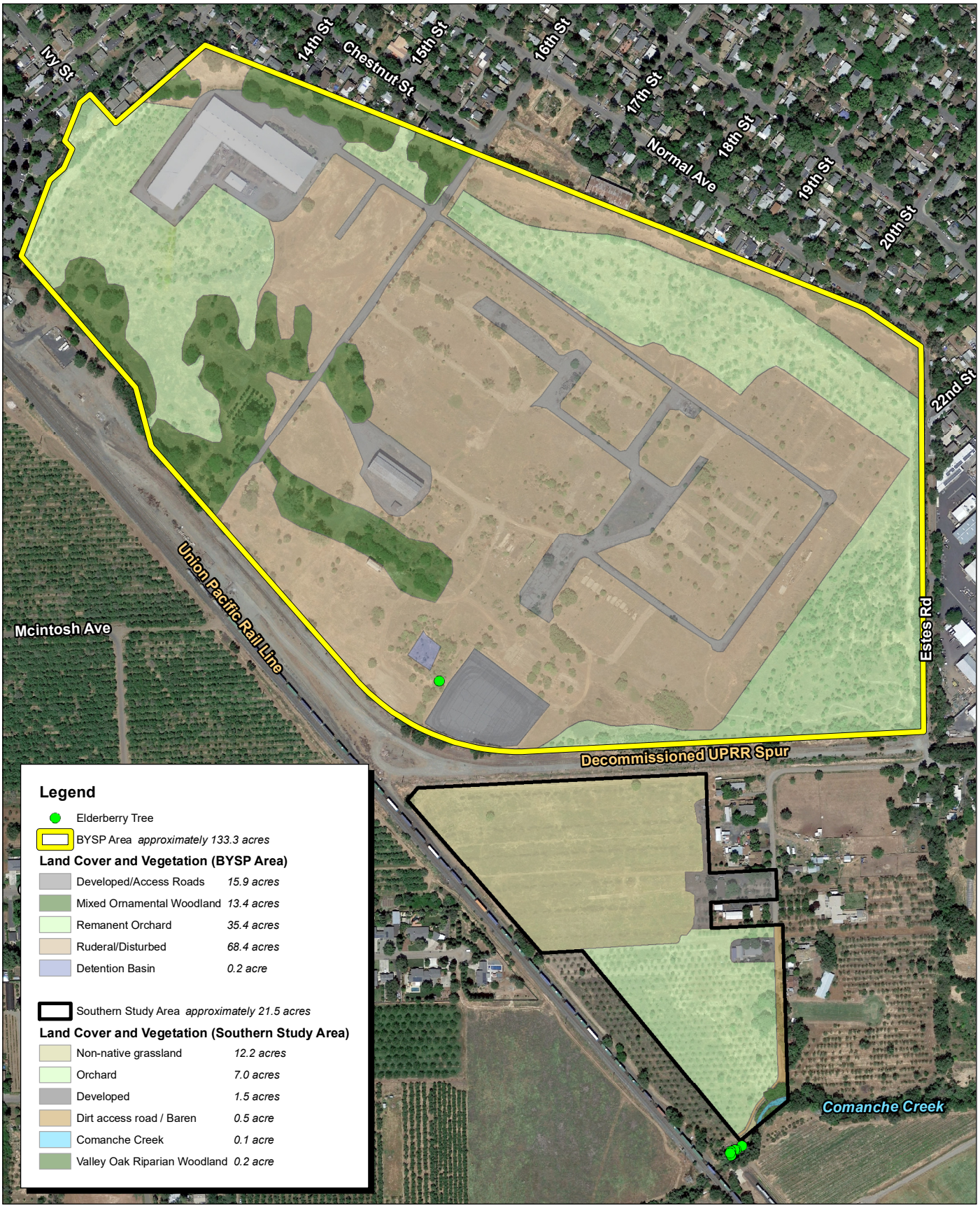

Source: Google Earth Aerial Imagery. Butte County Association of Governments; and NorthStar, 05/2023. ADEMA Environmental, 01/10/2024.

FIRSTCARBON SOLUTIONS™

500 250 0 500 Feet

Exhibit 3.4-1
Vegetation Communities and Land Cover Types

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Remnant Orchard (BYSP Area)—Approximately 35.4 Acres

An orchard is an intentional plantation of trees or shrubs that is maintained for food production. Orchards comprise fruit or nut-producing trees which are generally grown for commercial production. Such trees are often arranged in rows. Orchard communities are typically comprised of artificially irrigated habitat dominated by one, sometimes several, tree or shrub species planted for cultivation. Trees are typically low and bushy, and the understory is open, with little groundcover. Deciduous orchards include a variety of fruit trees (e.g., apples, apricots, cherries, citrus, kiwi, peaches, nectarines, pears, persimmons, plums, pluots, pomegranates, etc.) and/or nut trees and shrubs (e.g., almonds, olives, pistachios, walnuts, etc.). Understory species generally consist of short native and non-native grasses and other herbaceous species. The remnant orchard within the northern, western, and eastern portions of the BYSP Area is comprised mostly of almond (*Prunus dulcis)* trees. Google Earth aerial imagery indicates that the remnant orchard has been mostly inactive for over 20 years.

Developed/Access Roads (BYSP Area)—Approximately 15.9 Acres

Developed/Access Roads land cover areas are characterized by a combination of developed and hardscaped areas, including paved roads, with little or no exposed soil substrates. Cement access roads in varying degrees of condition can be found interspersed throughout the central portion of the BYSP Area.

Mixed Ornamental Woodland (BYSP Area)—Approximately 13.4 Acres

Several clusters of ornamental trees occur in the northern and westerns portion of the BYSP Area in association with former developments on-site. These trees and areas of ornamental vegetation are primarily composed of valley oak (*Quercus lobata)*, black walnut (*Juglans nigra)*, pecan (*Carya illinoinensis)*, deodar cedar (*Cedrus deodara)*, tree of heaven (*Ailanthus altissima)*, California fan palm (*Washingtonia filifera)*, and Monterey cypress (*Cupressus macrocarpa)*, among others.

Detention Basin (BYSP Area)—Approximately 0.2 Acre

A detention basin can be found toward the southwestern corner of the BYSP Area. The basin is contained by an approximately 10-foot-tall earthen berm. The basin appears to be fed by a culvert on its east bank. At the time of the field surveys, the basin was dry. Ruderal vegetation and annual grasses were present within the basin (see Appendix D.1). Species observed within this area included medusa head (*Taeniatherum caput-medusae*), and yellow star thistle, among others. Based on review of Google Earth aerial imagery, the basin appears to have been constructed sometime between 1947 and 1969. The basin has likely been non-functional for numerous years due to the vacant nature of the BYSP Area.

Southern Study Area

The Southern Study Area consists of the approximately 21.5-acre off-site improvement area (adjacent to the BYSP Area) where the proposed stormwater basin would be constructed, as well as the area surrounding the outfall alignment. This area consists of the following vegetation communities and land cover types.

Orchard (Southern Study Area)—Approximately 7 Acres

The southern portion of the Southern Study Area, where the proposed outfall alignment traverses, consists of almond orchards. These orchards appear to be actively managed, with herbaceous understory plant cover that consists of managed ruderal non-native grasses and forbs.

Non-native Grassland (Southern Study Area)—Approximately 12.2 Acres

This community is found within a field in the northern portion of the Southern Study Area. This community is dominated by non-native annual grasses, such as soft brome (*Bromus hordeaceus*), wild oats (*Avena* sp.), and ripgut brome.

Dirt Access Road/Barren (Southern Study Area)—Approximately 0.5 Acre

A dirt access road is located within the eastern border of the Southern Study Area. The dirt road is associated with the terminus of Estes Road. Small areas of managed, non-native grasses and forbs were observed on the edges of the road.

Developed (Southern Study Area)—Approximately 1.5 Acre

While not a natural habitat type, urban/developed areas typically consist of buildings, hardscape such as asphalt or concrete and other manufactured structures. The eastern portion of the Southern Study Area contains developed land in the form of a single-family residence and associated driveway.

Valley Oak Riparian Woodland (Southern Study Area)—Approximately 0.2 Acre

The woody vegetation present along Comanche Creek can be best described as Valley Oak Riparian Woodland given the dominate tree species consists of valley oak. Other trees and shrubs observed included black walnut, Himalayan blackberry (*Rubus armeniacus*), blue elderberry (*Sambucus nigra* ssp. *caerulea)*, and willows (*Salix* sp.). This community qualifies as California Sensitive Natural Community (71.045.00 Valley Oak Riparian Forest and Woodland).[1]

Comanche Creek/Aquatic—0.1 Acre

The southern boundary of the Southern Study Area overlaps with the aquatic habitat of Comanche Creek.

Elderberry Cluster (Outside of Off-site Improvement Area)–Approximately 0.03 Acre

In addition to the types of vegetation communities/land cover types described above within the proposed project site, this analysis considers an off-site blue elderberry cluster containing six individuals with DBHs ranging from 4 to 42 inches, which were observed within the Valley Oak Riparian Woodland Community. Specifically, the Arborist Survey Report (Appendix D.2) identified these shrubs as "ELD # 2-7." This cluster is located adjacent to (but outside of) the southwestern corner of the off-site improvement area. This feature is discussed in further detail below in relation to potential habitat for the VELB.

[1] California Department of Fish and Wildlife (CDFW). 2022. California Sensitive Natural Communities. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline. Accessed October 21, 2024.

Common Wildlife

The vegetation community and land cover types discussed above provide habitat for numerous wildlife species. Wildlife activity during the field surveys consisted primarily of avian species, including California scrub jay (Aphelocoma californica), turkey vulture (Cathartes aura), house finch (Haemorhous mexicanus), European starling (Sturnus vulgaris), mourning dove (Zenaida macroura), northern mockingbird (Mimus polyglottos), and American crow (Corvus brachyrhynchos).

Additionally, western fence lizard (Sceloporus occidentalis) and black-tailed jackrabbit (Lepus californicus) were also observed during the field surveys.

Special-status Species

Special-status species, whether plants, wildlife, or fish, are considered sufficiently rare that they require special consideration and/or protection and have been or should be listed as rare, threatened, or endangered by the federal and/or State governments. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under the California Endangered Species Act (CESA) or the federal Endangered Species Act.
- Protected under other regulations (e.g., Migratory Bird Treaty Act [MBTA]).
- CDFW Species of Special Concern.
- Plant species ranked by the California Native Plant Society (CNPS).
- Otherwise entitled to receive consideration during environmental review under the California Environmental Quality Act (CEQA) pursuant to applicable laws and regulations.

Table 3.4-2 and Table 3.4-3 focus on potential for occurrence of special-status species in the project site based on existing conditions.

Table 3.4-2: Special-status Plant Species Evaluated

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
Astragalus tener var. ferrisiae Ferris' milk-vetch	—	—	1B.1	Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. Elevation: 4-80 m. Bloom period: April–May	**Absent.** Project site does not contain meadows, seeps, valley and foothill grassland. The project site has been subjected to many years of anthropogenic disturbances.
Balsamorhiza macrolepis big-scale balsamroot	—	—	1B.2	Chaparral, cismontane woodland and valley and foothill grassland. Sometimes occurs in serpentinite soils. Elevation: 45-1555 m.	**Absent.** Project site does not contain suitable habitat chaparral cismontane woodland, or valley or foothill grassland. The project site has

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
				Bloom period: March–June	been subjected to many years of anthropogenic disturbances.
Brasenia schreberi watershield	—	—	2B.3	Freshwater marshes and swamps. Aquatic known from water bodies both natural and artificial in California. Elevation: 1-2180 m. Bloom period: May–July	**Absent.** Project site does not contain marshes or swamps. The project site has been subjected to many years of anthropogenic disturbances.
Calystegia atriplicifolia ssp. buttensis Butte County morning-glory	—	—	4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland. Prefers rocky terrain. Elevation: 565-1524 m Bloom period: May–July	**Absent.** Project site does not contain chaparral, lower montane coniferous forest, valley, or foothill grassland. The project site has been subjected to many years of anthropogenic disturbances.
Cardamine pachystigma var. dissectifolia dissected-leaved toothwort	—	—	1B.2	Chaparral, lower montane coniferous forest, rocky and serpentinite habitat. Elevation: 255-2100 m. Bloom period: February–March	**Absent.** Project site does not contain chaparral, lower montane coniferous forest. The project site has been subjected to many years of anthropogenic disturbances.
Castilleja rubicundula var. rubicundula pink creamsacs	—	—	1B.2	Chaparral in openings, cismontane woodland, meadows and seeps, and valley and foothill grassland. Needs serpentine soils. Elevation: 20-910 m. Bloom period: April–June	**Absent.** Project site does not contain chaparral cismontane woodlands, meadows or seeps, or valley and foothill grasslands. The project site has been subjected to many years of anthropogenic disturbances.
Clarkia gracilis ssp. albicaulis white-stemmed clarkia	—	—	1B.2	Chaparral and Cismontane woodland. Serpentinite habitat preferred. Elevation: 245-1085 Bloom Period: May–July	Absent. Project site does not contain chaparral or cismontane woodlands. The project site has been subjected to many years of anthropogenic disturbances.
Cryptantha crinita silky cryptantha	—	—	1B.2	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland, valley and foothill grassland. Elevation: 61-1215 m Bloom Period: April–May	Absent. Project site does not contain suitable habitat such as cismontane woodlands, lower montane coniferous forests, riparian forests, riparian woodlands or valley and foothill grasslands. The project site has been subjected to many years of anthropogenic disturbances.

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
Delphinium recurvatum recurved larkspur	—	—	1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland. Alkaline soil. Elevation: 3-790 m Bloom Period: March–June	**Absent.** Project site does not contain suitable habitat such as chenopod scrub, cismontane woodlands, valley or foothill grasslands. The project site has been subjected to many years of anthropogenic disturbances.
Eriogonum umbellatum var. ahartii Ahart's buckwheat	—	—	1B.2	Chaparral and cismontane woodland. Prefers openings, serpentinite and slopes. Elevation: 400-2000 m Bloom Period: June–September	**Absent.** Project site does not contain suitable habitat such as cismontane woodlands or chaparral habitats. The project site has been subjected to many years of anthropogenic disturbances.
Euphorbia hooveri Hoover's spurge	FT	—	1B.2	Vernal pools. Elevation: 25 - 250 m. Blooming period: July–September (October).	**Absent.** Project site does not contain suitable habitat such as vernal pools. The project site has been subjected to many years of anthropogenic disturbances.
Fritillaria eastwoodiae Butte County fritillary	—	—	3.2	Chaparral, cismontane woodland, lower montane coniferous forest. Usually on dry slopes but also found in wet places; Grows in serpentine, red clay, or sandy soils. Elevation: 1475—4550 m. Blooming period: March–June	**Absent.** Project site does not contain suitable habitat such as chaparral, cismontane woodlands, or lower montane coniferous forests. The project site has been subjected to many years of anthropogenic disturbances.
Fritillaria pluriflora adobe-lily	—	—	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Usually on clay soils; sometimes serpentine. Elevation: 45-945 m. Blooming period: February–April	**Absent.** Project site does not contain suitable habitat such as cismontane woodlands, chaparral, valley and foothill grassland. The project site has been subjected to many years of anthropogenic disturbances.
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	—	—	1B.2	Marshes and swamps (freshwater), often in riprap on sides of levees. Elevation: 0-120 m Bloom Period: June–September	**Absent.** Project site does not contain suitable habitat such as marshes and swamps. The project site has been subjected to many years of anthropogenic disturbances.
Imperata brevifolia	—	—	2B.1	Occurs in mesic and alkali soils (often) in chaparral, coastal	**Absent.** Project site does not contain suitable habitat such

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
California satintail				scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub. Elevation: 1,370–2,895 m Bloom period: February–July	as chaparral or coastal scrub, meadows and seeps. The project site has been subjected to many years of anthropogenic disturbances.
Juncus leiospermus var. leiospermus Red Bluff dwarf rush	—	—	1B.1	Chaparral, cismontane woodland, meadows and seeps, valley and football grassland, vernal pools. Elevation: 35-1250 m Bloom Period: March–June	**Absent.** Project site does not contain suitable habitat such as chaparral, cismontane woodland, meadows and seeps. The project site has been subjected to many years of anthropogenic disturbances.
Limnanthes floccosa ssp. californica Butte County meadowfoam	FE	SE	1B.1	Valley and foothill grassland (mesic) and vernal pools. Elevation: 46-930 Blooming period: March–May	**Absent.** The project site does not contain suitable habitat such as vernal pools. The project site has been subjected to many years of anthropogenic disturbances.
Limnanthes floccosa ssp. floccosa woolly meadowfoam	—	—	4.2	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools. Most commonly occurs in vernally wet areas, ditches, and ponds. Elevation: 60-1335 m. Bloom period: March–June	**Absent.** The project site does not contain suitable habitat such as cismontane woodlands, chaparral, foothill grasslands, or vernal pools. The project site has been subjected to many years of anthropogenic disturbances.
Monardella venosa veiny monardella	—	—	1B.1	Cismontane woodland, valley and foothill grassland, clay soil. Elevation: 60-410 m Bloom Period: May–July	**Absent.** The project site does not contain suitable habitat such as cismontane woodlands and foothill grasslands. The project site has been subjected to many years of anthropogenic disturbances.
Paronychia ahartii Ahart's paronychia	—	—	1B.1	Cismontane woodland, valley and foothill grassland, vernal pools. Elevation: 30-510 m Bloom Period: February–June	**Absent.** The project site does not contain suitable habitat such as cismontane woodlands, valley and foothill grasslands. The project site has been subjected to many years of anthropogenic disturbances.
Rhynchospora californica	—	—	1B.1	Bogs and fens, open marshes and swamps, lower montane	**Absent.** The project site does not contain suitable habitat such as bogs, ferns, open

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
California beaked-rush				coniferous forest, meadows and freshwater seeps. Elevation: 45-270 m. Bloom period: May–July	marshes, swamps, or lower montane coniferous forests. The project site has been subjected to many years of anthropogenic disturbances.
Rhynchospora capitellata brownish beaked-rush	—	—	2B.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. Mesic sites. Elevation: 45-1710 m. Bloom period: July–August	**Absent.** The project site does not contain suitable habitat such as lower montane coniferous forest, meadows and seeps, marshes and swamps. The project site has been subjected to many years of anthropogenic disturbances.
Sidalcea robusta Butte County checkerbloom	—	—	1B.2	Chaparral and cismontane woodland. Elevation 90-1600 m. Bloom period: April–June	**Absent.** The project site does not contain suitable habitat such as chaparral and cismontane woodland. The project site has been subjected to many years of anthropogenic disturbances.
Stuckenia filiformis ssp. alpina northern slender pondweed	—	—	2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. Elevation: 5-2325 m. Bloom period: May–July	**Absent.** The project site does not contain suitable habitat such marshes and swamps. The project site has been subjected to many years of anthropogenic disturbances.
Trifolium jokerstii Butte County golden clover	—	—	1B.2	Valley and foothill grassland (mesic) and vernal pools. Elevation: 50-480 m Bloom period: March–May	**Absent.** The project site does not contain suitable habitat such mesic valley and foothill grasslands and vernal pools. The project site has been subjected to many years of anthropogenic disturbances.
Tuctoria greenei Greene's tuctoria	FE	CR	1B.1	Vernal pools Elevation 30 -1070 m. Blooming period: May–July	**Absent.** The project site does not contain suitable habitat such as vernal pools. The project site has been subjected to many years of anthropogenic disturbances.
Wolffia brasiliensis Brazilian watermeal	—	—	2B.3	Marshes and swamps (shallow freshwater) Elevation: 20-100 m Blooming period: April–December	**Absent.** The project site does not contain suitable habitat such as marshes and swamps. The project site has been subjected to many years of anthropogenic disturbances.

Scientific Name Common Name	Status			Habitat Description[4]	Occurrence Determination and Rationale[5]
	USFWS[1]	CDFW[2]	CNPS[3]		
Code Designations					
[1] Federal Status: 2023 USFWS Listing		**[2] State Status: 2023 CDFW Listing**		**[3] CNPS: 2023 CNPS Listing**	
ESU = Evolutionary Significant Unit is a distinctive population. **FE** = Listed as endangered under the Endangered Species Act. **FT** = Listed as threatened under the Endangered Species Act. **FC** = Candidate for listing (threatened or endangered) under the Endangered Species Act. **FD** = Delisted in accordance with the Endangered Species Act. **FPD** = Federally Proposed to be Delisted. **MBTA** = protected by the Migratory Bird Treaty Act **—** = Not federally listed		**SE** = Listed as endangered under the California Endangered Species Act (CESA). **ST** = Listed as threatened under CESA. **SSC** = Species of Special Concern as identified by the CDFW. **FP** = Listed as fully protected under the Fish and Game Code. **CFG** = FGC = protected by Fish and Game Code 3503.5 **CR** = Rare in California. **—** = Not State-listed		**Rank 1A** = Plants presumed extirpated in California and either rare or extinct elsewhere **Rank 1B** = Plants rare, threatened, or endangered in California and elsewhere **Rank 2A** = Plants presumed extirpated in California but common elsewhere **Rank 2B** = Plants rare, threatened, or endangered in California but more common elsewhere **Rank 3** = Plants about which more information is needed **Rank 4** = Watch List: Plants of limited distribution **Blooming period:** Months in parentheses are uncommon.	

[4] **Habitat Description**: Habitat description adapted from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) online inventory or other specified source*.

[5] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6 or other specified source*.

Table 3.4-3: Special-status Wildlife Species Evaluated

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale[4]
	USFWS[1]	CDFW[2]		
Amphibians				
Rana boylii foothill yellow-legged frog	—	SE SSC	Partly shaded, shallow streams and riffles with a rocky substrate in forests, chaparral, and woodlands. Needs at least some cobble-sized substrate for egg-laying.	**None.** There is no documented breeding habitat within the project area. There nearest recorded occurrence of this species is 5 miles west of the project site from 1961. This occurrence is now considered extirpated due to observations of bullfrogs throughout the 1970s. Moreover, the project site is cut off

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale[4]
				from any potential frog in-migration by previous anthropogenic disturbances-intensive agricultural, residential housing, roads etc.
Spea hammondii western spadefoot	— 	— SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	**None.** The project site does not habitat suitable for breeding, such as vernal pools. There is also no record of this species within the project area.
Birds				
Agelaius tricolor tricolored blackbird	— MBTA	ST SSC	Breeds near fresh water in dense emergent vegetation.	**None.** The project site does contain dense emergent vegetation to support this species. Additionally, the nearest record of this species is 2.7 miles east of the project site. Moreover, there is no record of this species within the project area or associated with the creek.
Athene cunicularia burrowing owl	— MBTA	— SSC	Found in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. A subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel (Otospermophilus beecheyi).	**Low.** Marginal habitat is present on-site. Burrows were observed on-site, but no signs of burrowing owl presence were observed during the field survey. The nearest record of this species is 2 miles east of the project site.
Buteo swainsoni Swainson's hawk	— MBTA	ST —	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Moderate.** The project site does contain habitat suitable for this species. There are numerous potential nesting trees and access to adjacent foraging habitat. The nearest record of this species is 2.4 miles south of the project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT MBTA	SE —	Nests in riparian forest along the broad lower flood-bottoms of larger river systems. Found in riparian jungles of willow, often mixed with cottonwoods; understory consists of blackberry, nettles, and wild grape.	**None.** The project site does not contain suitable habitat to support this species. The nearest recorded occurrences are all associated with the Sacramento River and are over 6 miles west of the project site.
Falco peregrinus anatum	FPD MBTA	— FP	Near wetlands, lakes, rivers, or other aquatic features. Nests on	**None.** No nesting habitats such as cliffs and coastal habitats are

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale[4]
American peregrine falcon			cliffs, coastal habitats or tall buildings.	present within the project area. There is also no record of this species within the project area or associated with the creek. The site is also heavily disturbed from agricultural and industrial development activities.
Haliaeetus leucocephalus bald eagle	FPD MBTA	SE FP	Breeding habitat is usually within 4 km of a water source in a tall tree or cliffs; roosting in large numbers in winter is common.	**None.** The project site does not contain suitable habitat to support this species. The nearest recorded occurrence is over 5.5 miles northeast of the project site associated with Bidwell Park and Horseshoe Lake.
Lanius ludovicianus loggerhead shrike	— MBTA	— SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	**None.** The project site does not contain suitable habitat to support this species. The site and surrounding areas have been subject to anthropogenic disturbance. There is also no recent occurrence record of the species within the project area.
Laterallus jamaicensis coturniculus California black rail	— MBTA	ST FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**None.** The project site does not contain habitat suitable for this species such as freshwater marshes, wet meadows, and shallow margins of saltwater marshes. There is also no record of this species within the project area or associated with the creek.
Riparia riparia bank swallow	— MBTA	ST —	Nests in riparian scrub and riparian woodland. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**None.** The project site does not contain suitable habitat to support this species. The nearest recorded occurrences are all associated with the Sacramento River and are over 6 miles west of the project site.
Setophaga petechia yellow warbler	— MBTA	— SSC	Occurs and nests in willow shrubs and thickets, cottonwoods, sycamores, ash, and alders, predominantly in riparian habitats.	**None.** The project site does not contain suitable habitat to support this species. The nearest recorded occurrence is over 12 miles south of the project site associated with Gold Run Creek in 2002.
Vireo bellii pusillus least Bell's vireo	FE MBTA	SE —	Occurs and nests in low riparian habitat in the vicinity of water or in dry river bottoms.	**None.** The project site does not contain suitable habitat to support this species. All two recorded occurrences within 10 miles are

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale[4]
				from over 100 years ago. These occurrences are now considered extirpated due to conversion of habitat into agriculture.
Invertebrate				
Branchinecta conservatio Conservancy fairy shrimp	FE	— —	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	**None.** The project site does not contain habitat suitable for this species such as turbid pools or swales. There is also no record of this species within the project area or associated with the creek.
Branchinecta lynchi vernal pool fairy shrimp	FT	— —	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**None.** The project site does not contain habitat suitable for this species such as rain-filled pools or sandstone depressions. There is also no record of this species within the project area or in association with the creek.
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT	— —	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus mexicana). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries. Common in riparian scrub.	**Moderate.** The project site contains elderberry shrubs which have the potential to provide suitable habitat for this species. Exit holes were observed during field surveys. There is a record of this species within 2.3 miles of the project area, but none within the project site itself.
Lepidurus packardi vernal pool tadpole shrimp	FE	— —	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**None.** The project site does not contain habitat suitable for this species such as vernal pools and swales. There is also no record of this species within the project area or in association with the creek.
Fish				
Acipenser medirostris pop. 1 green sturgeon–southern DPS	FT	— —	Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder.	**None.** The project site does not contain suitable aquatic habitat to support this species. There is also no record of this species within the project area or in association with the creek.

Scientific Name Common Name	Status USFWS[1]	 CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale[4]
Oncorhynchus mykiss irideus (pop. 8) steelhead (central California coast DPS)4	FT	—	Steelhead require cool, swift, shallow water and clean loose gravel for spawning, and suitably large pools in which to spend the summer. Minimum water depth for upstream migration is 18 cm. Water velocities greater than 3-4 m/sec may impede upstream progress.	**None.** The project site does not contain suitable aquatic habitat to support this species. There is also no record of this species within the project site or in association with the creek. Moreover, the reach of the creek within the project area does not contain suitable substrate for spawning.
Oncorhynchus tshawytscha pop. 11 chinook salmon–Central Valley spring-run ESU	FT	ST —	Occurs in Sacramento and San Joaquin Rivers and their tributaries. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults.	**None.** The project site does not contain suitable aquatic habitat to support this species. There is also no record of this species within the project area or in association with the creek.
Mammals				
Antrozous pallidus pallid bat	—	— SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Species is very sensitive to disturbance of roosting sites.	**Low.** The project site does contain suitable roosting habitat to support this species. There has been a recorded occurrence of the species within the project area.
Eumops perotis californicus western mastiff bat	—	— SSC	Found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting.	**Low.** The project site does contain suitable roosting habitat to support this species. There has been a recorded occurrence of this species within the project area.
Lasiurus blossevillii western red bat	—	— SSC	Roosts primarily in trees, 2–40 feet aboveground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Low.** Trees along Comanche Creek and within the project site contain potential roosting habitat.
Taxidea taxus American badger	—	— SSC	Found in drier open stages of most shrub, forest, and herbaceous habitats with friable	**None.** There is no record of this species within the project site or surrounding project area. The

Scientific Name Common Name	Status USFWS[1]	Status CDFW[2]	Habitat Description[3]	Potential to Occur and Rationale[4]
			soils. Requires sufficient food sources (rodents), friable soils, and open, uncultivated ground. Digs large burrows.	project site has been subjected to many years of anthropogenic disturbances from agricultural and industrial activities further precluding this species.
Reptiles				
Emys marmorata western pond turtle	—	— SSC	This species is a thoroughly aquatic turtle found in ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation below 6,000 feet elevation. Requires basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying.	**Low.** Commanche Creek and adjacent upland habitat provides potential suitable habitat. The nearest occurrences recorded are located a mile east of the site within ponds located along Fair Street.
Phrynosoma blainvillii coast horned lizard	—	— SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads. Often found near ant hills feeding on ants.	**None.** The project site does not contain suitable habitat to support this species such as coniferous forests, woodlands, and chaparral. There is also no record of this species within the project site or project area. The project site has been subjected to many years of anthropogenic disturbances.
Thamnophis gigas giant garter snake	FT	ST —	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	**Low.** Comanche Creek, which is considered a potential travel corridor for giant garter snake. There has been a recorded occurrence of the species 5 miles west of the project site.

Code Designations

[1] Federal Status: 2023 USFWS Listing	[2] State Status: 2023 CDFW Listing
ESU = Evolutionary Significant Unit is a distinctive population. DPS = Distinct Population Segment. FE = Listed as endangered under the Endangered Species Act. FT = Listed as threatened under the Endangered Species Act. FC = Candidate for listing (threatened or endangered) under the Endangered Species Act.	SE = Listed as endangered under the California Endangered Species Act (CESA). ST = Listed as threatened under CESA. SSC = Species of Special Concern as identified by the CDFW. FP = Listed as fully protected under the Fish and Game Code. CFG = FGC = protected by Fish and Game Code 3503.5 CE = Candidate endangered under CESA. — = Not State-listed

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale[4]
	USFWS[1]	CDFW[2]		
FD = Delisted in accordance with the Endangered Species Act. FPD = Federally Proposed to be Delisted. MBTA= protected by the Migratory Bird Treaty Act — = Not federally listed				

[3] **Habitat Description**: Habitat description adapted from the California Natural Diversity Database (CNDDB) or other specified source*.
[4] **Potential to Occur and Rationale**: Location of recorded species occurrences determined by geospatial information from BIOS 6 or other specified source*.

Wildlife Movement Corridors

The majority of the Study Area consists of partially vacant land that has been subject to varying degrees of anthropogenic disturbances. The Study Area is also surrounded by urban development to the north and east that limits wildlife movement. Therefore, the upland portions (e.g., those to the north of Comanche Creek) of the Study Area would not function as a wildlife movement corridor. Comanche Creek and the associated riparian habitat that flanks the creek could function as a wildlife corridor for aquatic and terrestrial wildlife along the southern edge of the Southern Study Area, but primarily outside the Study Area.

There are no native wildlife nursey sites present within the Study Area.

Trees

According to the Arborist Survey Report (Appendix D.2) the BYSP Area, the Southern Study Area, and the immediate vicinity contain approximately 935 trees with DBHs greater or equal to 6 inches.[2] Species observed consists of almond (*Prunus amygdalus*), black walnut, California fan palm, Canary Island date palm (*Phoenix canariensis*), Chinese hackberry (*Celtis sinensis*), Chinese pistache (*Pistacia chinensis*), coastal redwood (*Sequoia sempervirens*), Mexican fan palm (*Washingtonia robusta*), pecan (*Carya illinoinensis*), sycamore (*Platanus occidentalis*), tree of heaven (*Ailanthus altissima*), and valley oak (*Quercus lobata*).

As outlined above, one blue elderberry shrub was observed within the BYSP Area. Additionally, an off-site blue elderberry cluster (containing six individuals) was observed adjacent to the southwestern corner of the Southern Study Area, bordering Comanche Creek. Of the approximately 935 trees surveyed, approximately 721 trees are in good health and approximately 152 are recommended for removal for the reasons detailed in the Arborist Report.

Wetlands and Waters of the United States and the State

In general, wetlands and waters of the United States and waters of the State are protected as aquatic resources that provide habitat for common and special-status species. Types of aquatic resource

[2] Adema Environmental. 2024. Arborist Survey Report Baber Yard Area. Accessed October 21, 2024

features include open water, developed open water, tidal marsh, seasonal wetland, wetlands swale, streams, creeks, and other waters.

Within the project site, as noted above, there appears to be a detention basin, a remnant manufactured ditch, and a segment of Comanche Creek. See below for further discussion about the potential jurisdictional nature of the foregoing existing features.

3.4.3 - Regulatory Framework

Federal

Endangered Species Act of 1973

The United States Fish and Wildlife Service (USFWS) has jurisdiction over species listed as threatened or endangered under the federal Endangered Species Act of 1973. Section 9 of the Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitats. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process. Procedures for addressing impacts to federally listed species follow two principal pathways, both of which require consultation with the USFWS, which administers the Endangered Species Act for all terrestrial species. The first pathway is the Section 10(a) incidental take permit, which applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the Endangered Species Act. The second pathway is Section 7 consultation, which applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval.

Migratory Bird Treaty Act

The MBTA implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under the MBTA (16 United States Code [USC] § 703, *et seq*.).The golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) are afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC § 669, *et seq*.) and the Bald and Golden Eagle Protection Act (16 USC §§ 668–668d).

Clean Water Act

Section 404

The agencies are in receipt of the U.S. Supreme Court's May 25, 2023 decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in the *Sackett* case. In *Sackett*, the Supreme Court adopted the Rapanos plurality's test for adjacent wetlands: only those wetlands with a continuous surface connection to other regulated waters, such that the two are indistinguishable.

The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States. The term "waters of the United States" is defined in USACE regulations at 33 Code of Federal Regulations Part 328.3(a) as:

1. Waters which are:
    a. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    b. The territorial seas; or
    c. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
3. Tributaries of waters identified in paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    a. Waters identified in paragraph (a)(1) of this section; or
    b. Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

The following are not "waters of the United States":

1. Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
2. Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the United States Environmental Protection Agency (EPA);
3. Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
4. Artificially irrigated areas that would revert to dry land if the irrigation ceased;
5. Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

6. Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
7. Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
8. Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the ordinary high water mark (OHWM).

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401

Section 401 of the CWA states that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

State

California Endangered Species Act

The State of California enacted CESA in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires lead agencies to consult with the CDFW when preparing CEQA documents to ensure that the lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project

consistent with conserving the species. CESA allows the CDFW to authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA. Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the NPPA (FGC § 1900, *et seq*.) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right-of-way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the project.

In addition to formal listing under the Endangered Species Act and CESA, some species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a "Species of Special Concern." The CDFW maintains lists of "Species of Special Concern" that serve as species "watch lists." Species with this status may have limited distributions or limited populations, and/or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection under the Endangered Species Act or CESA, they may be considered rare under CEQA and specific protection measures may be warranted. In addition to Species of Special Concern, the CDFW Special Animals List identifies animals that are tracked by the California Natural Diversity Database (CNDDB) and may be potentially vulnerable but warrant no federal interest and no legal protection. Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. As discussed further below, certain ranks of unlisted plant species on the CNPS List typically require evaluation under CEQA.

Fish and Game Code Sections 3500 to 5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections

may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

Fish and Game Code Section 1602 requires any entity to notify the CDFW before beginning any activity that "may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake" or "deposit debris, waste, or other materials that could pass into any river, stream, or lake." "River, stream, or lake" includes waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement will be required if the CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water. CDFW jurisdiction typically extends to the edge or "drip line" of the riparian habitat or top of bank. Additionally, the CDFW may assert jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over 4 inches DBH. If an existing fish or wildlife resource may be substantially adversely affected by the activity, the CDFW may propose reasonable measures that will allow protection of those resources. If the applicant agrees to these measures, the applicant may enter into an agreement with the CDFW identifying the covered activities, impacts to the CDFW jurisdictional features, and compensatory mitigation.

California Porter-Cologne Water Quality Control Act

The California State Water Resources Control Board (State Water Board) and the nine RWQCBs regulate actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)).

In 2019, the State Water Board published the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) to guide wetland/waters of the State determinations and the permitting process.[3]

As described below, waters of the State include some, but not all, features that are defined as wetlands, as well as other features, including the ocean, lakes, and rivers. The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State defines a wetland as follows: An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

Under California State law, waters of the State means "any surface water or groundwater, including saline waters, within the boundaries of the State." As such, water quality laws apply to both surface water and groundwater. After the United States Supreme Court decision in Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (531 USC 159), the Office of Chief Counsel of the State Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the California Porter-Cologne Water Quality Control Act, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Board regulates discharges to isolated waters in much the same way as it does for waters of the United States, using Porter-Cologne rather than CWA authority.

California Native Plant Society

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations. Nevertheless, some level of CEQA review is justified for California Rare Plant Rank (CRPR) 4 taxa, and under some circumstances, a full impact analysis is warranted. Taxa that can be shown to meet the criteria for endangered, rare,

[3] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. April 2, 2019.

or threatened status under CEQA Section 15380(d) or that can be shown to be regionally rare or unique as defined in CEQA Section 15125(c) must be fully analyzed in a CEQA document. Some circumstances, such as local rarity, having occurrences peripheral to the taxon's distribution, or having occurrences on unusual substrates or rare and declining habitats, provide justification for treating some CRPR 4 taxa occurrences as regionally rare or unique.

One limitation to fully analyzing impacts on CRPR 4 taxa is the difficulty in obtaining current data on the number and condition of the occurrences.[4]

Local

City of Chico General Plan

The Chico 2030 General Plan establishes the following goals, policies, and actions relevant to biological resources:

Goal OS-1 Protect and conserve native species and habitats.

Policy OS-1.1 **(Native Habitats and Species):** Preserve native species and habitat through land use planning, cooperation, and collaboration.

Action OS-1.1.1 **(Development/Preservation Balance)**: Direct development to appropriate locations consistent with the Land Use Diagram, and protect and preserve areas designated Open Space and areas that contain sensitive habitat and species.

Action OS-1.1.2 **(Regional Conservation Planning):** Actively participate in regional conservation planning efforts, in particular the Butte County Habitat Conservation Plan process, sponsored by the Butte County Association of Governments, which seeks the preservation of habitat areas needed for the ongoing viability of native species.

Action OS-1.1.3 **(Sustainable Community Strategy):** In support of AB 32, work with the Butte County Association of Governments to implement the Sustainable Community Strategy (SB 375), which directs smart-growth development to urbanized areas.

Action OS-1.1.5 **(Control Invasive Species):** Prioritize efforts to remove non-native species within Bidwell Park and other City greenways, and condition new development adjacent to Bidwell Park and greenways to protect native species and habitat from the introduction of invasive species.

Policy OS-1.2 **(Regulatory Compliance):** Protect special-status plant and animal species, including their habitats, in compliance with all applicable State, federal and other laws and regulations.

[4] California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Sacramento, CA. 21 January 2020.

Action OS-1.2.1 **(State and Federal Guidelines):** Ensure that project-related biological impacts are considered and mitigated, and require applicants to obtain all necessary local, State, and federal permits for projects that may affect special-status species or their habitat.

Policy OS-2.5 **(Creeks and Riparian Corridors)** Preserve and enhance Chico's creeks and riparian corridors as open space for their aesthetic, drainage, habitat, flood control, and water quality values.

Action OS-2.5.1 **(Setbacks from Creeks):** Consistent with the City's Municipal Code, require a minimum 25-foot setback from the top of creek banks to development and associated aboveground infrastructure as a part of project review, and seek to acquire an additional 75 feet. In addition, require a larger setback where necessary to mitigate environmental impacts.

Policy OS-2.6 **(Oak Woodlands)** Protect oak woodlands as open space for sensitive species and habitat.

City of Chico Municipal Code

Municipal Code Chapter 16.66 sets forth the City's Tree Preservation Regulations. Trees that are protected by the regulations include (1) any woody plant with a single stem of 18 inches or more in diameter; (2) all oaks, sycamores, Oregon ash, and big leaf maples with a 12-inch DBH; or (3) blue oaks, canyon live oaks, interior live oaks, California buckeye, madrone, toyon, redbud, California bay, and Pacific dogwood with 6-inch DBH. Additionally, these provisions apply to any trees required to be preserved as part of a project subject to discretionary approval. Permits are required for the removal of any trees subject to the chapter and the applicant must either offset the loss via on-site replanting of replacement trees or payment of an in lieu fee to the City.

3.4.4 - Methodology

Literature Review

Literature review was conducted to analyze existing documentation regarding biological resources and habitat conditions within the Study Area and is summarized below.

Existing Documentation

As part of the literature review, an FirstCarbon Solutions (FCS) Biologist compiled and analyzed existing environmental documentation for the Study Area and relevant areas in its vicinity. This documentation included literature pertaining to the habitat requirements of special-status species with the potential to occur in the Study Area and in the project vicinity; and federal register listings, protocols, and species data provided by the USFWS, CDFW, and CNPS. Additionally, the following documentation was reviewed, and relevant information was included in this Draft EIR and is further detailed in the BRA (Appendix D.1), accordingly:

- Diamond Match Specific Plan Environmental Setting Report[5]
- Natural Environment Study for the Butte County Area Governments Transit Facility Property Acquisition Project[6]
- Arborist Survey Report, Barber Yard Area[7]

Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the Study Area and immediate vicinity.[8] Information obtained from the topographic maps included elevation, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the EPA Watershed Assessment, Tracking, and Environmental Results System (WATERS).[9] Aerial photographs provided a perspective of the current site conditions relative to land use, plant community locations, and potential locations of wildlife movement corridors within the Study Area and immediate vicinity.

Soil Surveys

The USDA has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[10] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the Study Area and to inform whether the soil conditions on-site are potentially suitable for any special-status plant species. However, NRCS soil maps utilize an approximately 1.4-acre minimum mapping unit, and line placement may not be accurate on a large (i.e., parcel-level) scale.

Special-status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the Study Area and project vicinity based on a search of the USFWS Information for Planning and Consultation (IPaC) database,[11] the CNDDB, and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California for the *Chico, California*

[5] EIP Associates. 1996. Diamond Match Specific Plan Environmental Setting Report. June
[6] NorthStar Environmental. 2012. Natural Environment Study. July.
[7] Adema Environmental. 2024. Arborist Survey Report Baber Yard Area. Accessed October 21, 2024.
[8] United States Geological Survey (USGS). 2023. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed December 11, 2024.
[9] United States Environmental Protection Agency (EPA). 2023. Watershed Assessment, Tracking, and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed December 11, 2024.
[10] Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed December 11, 2024.
[11] United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed October 21, 2024.

USGS 7.5-minute Topographic Quadrangle Map, and the eight surrounding quadrangles.[12,13] The CNDDB Biogeographic Information and Observation System (BIOS 5) was used to determine the distance between the known occurrences of special-status species and the Study Area.[14]

Trees

Prior to conducting the reconnaissance-level field survey, an FCS Biologist reviewed applicable City ordinances pertaining to tree preservation and protection and ascertained whether tree replacement measures or permits for the removal of regulated trees would be required. An Arborist Survey Report was conducted for the BYSP Area in April of 2023 by McMillan Tree Service and Adema Environmental and updated to reflect the entire project site in March 2024 (Appendix D.2). The Arborist Survey Report was conducted by a qualified Arborist to determine the quantity and types of trees within the BYSP Area and vicinity and propose recommendations for the identified trees to the extent they are proposed to be removed.

Jurisdictional Waters and Wetlands

Prior to conducting the reconnaissance-level survey, an FCS Biologist reviewed EPA WATERS and aerial photography to identify potential natural drainage features and water bodies.[15] In general, all surface drainage features identified as blue-line streams on USGS maps and linear patches of vegetation are expected to exhibit evidence of flows and considered potentially subject to State and federal regulatory authority as waters of the United States and/or State. A preliminary assessment was conducted to determine the location of any existing drainages and water bodies and limits of project-related grading activities, to aid in determining whether a formal delineation of waters of the United States or State would be necessary.

Field Survey

FCS Senior Biologist, Robert Carroll, conducted general wildlife, habitat, vegetation community and aquatic resource surveys on January 19, and February 17, 2023. The objective of the field surveys was to ascertain general site conditions and wildlife use and to identify whether existing vegetation communities provide suitable habitat for special-status plant or wildlife species. Potentially sensitive areas identified during the literature review were ground-truthed during the field surveys for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

[12] California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database (CNDDB) RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed December 11, 2024.

[13] California Native Plant Society (CNPS). 2022. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed December 11, 2024.

[14] California Department of Fish and Wildlife (CDFW). 2023. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed December 11, 2024.

[15] United States Environmental Protection Agency (EPA). 2023. Watershed Assessment, Tracking, and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed December 11, 2024.

Wildlife species detected during the reconnaissance-level surveys by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the Study Area.

Vegetation

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified with the use of taxonomical guides, including Jepson eFlora and Calflora.[16,17] Taxonomic nomenclature used in this study follows The Jepson Manual: Vascular Plants of California.[18] Common plant names, when not available from The Jepson Manual, were taken from other regionally specific references. Vegetation types and boundaries were noted on aerial photos, verified through field observation, and digitized using Esri ArcGIS software® ArcMap 10.0. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the project site was prepared. Vegetation community and land cover types used to help classify habitat types are based on Manual of California Vegetation and cross-referenced with the CDFW Natural Communities List.[19,20]

Wildlife

All wildlife species that were detected during the on-site reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded, and notations were made regarding suitable habitat for those special-status species determined to potentially occur within the Study Area.[21] FCS staff used appropriate field guides to assist with species identification during surveys, such as Peterson, Reid, and Stebbins.[22,23,24] Online resources such as eBird and California Herps were consulted, as necessary.[25,26]

Wildlife Movement Corridors

As explained above, wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated “islands” of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

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16 Jepson Flora Project (eds.) 2020. Jepson eFlora. Website: https://ucjeps.berkeley.edu/eflora/. Accessed December 11, 2024.
17 Calflora. 2024. Calflora: Information on California plants for education, research, and conservation. Website: http://www.calflora.org/. Accessed December 11, 2024.
18 Baldwin, B. et al. 2012. The Jepson Manual: Vascular Plants of California. Berkeley: University of California Press. County of San Bernardino (Bernardino). 2007 (amended 2015).
19 Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento.
20 California Department of Fish and Wildlife (CDFW). 2024. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed October 21, 2024.
21 California Department of Fish and Wildlife (CDFW). 2024. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed December 11, 2024.
22 Peterson, T.R. 2010. A Field Guide to Birds of Western North America, 4th Edition. Boston: Houghton Mifflin Harcourt.
23 Reid, F. 2006. A Field Guide to Mammals of North America, 4th Edition. Boston: Houghton Mifflin Harcourt.
24 Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin Harcourt.
25 eBird. 2020. Online bird occurrence database. Website: http://ebird.org/content/ebird/. Accessed December 11, 2024.
26 California Herps. 2020. A Guide to the Amphibians and Reptiles of California. Website: http://www.californiaherps.com/. Accessed December 11, 2024.

The Study Area was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey. The scope of this analysis did not include a formal wildlife movement corridor study utilizing track plates, camera stations, scent stations, or snares, which was determined unnecessary given the site conditions and surrounding uses. Rather, the focus of this study was to determine whether the proposed project's change of land use within the Study Area could have significant impacts on the regional movement of wildlife.

The conclusions set forth in this Section 3.4 are based on the information compiled during the literature review, including aerial photographs, USGS topographic maps and resource maps for the vicinity; the field survey; and professional experience with the desired topography, habitat, and resource requirements of the special-status species potentially utilizing the project site and vicinity.

Approach to Analysis

Impacts on biological resources were evaluated based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present on the project site and vicinity, and the likely effects of project construction or operation on these resources. For the purposes of this Draft Environmental Impact Report (Draft EIR), the word "substantial" as used in the significance thresholds above is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to disturbance.

3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Special-status Species

Impact BIO-1:	**The proposed project could have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.**

Impact Analysis

Special-status Plant Species

The Special-status Plant Species Evaluation Table (Section 3.4.2, Table 1) lists 27 special-status plant species and CNPS sensitive species that have been recorded on the *Chico, California* USGS Topographic Quadrangle Map and the eight surrounding quadrangles by the CNDDB, CNPSEI, and IpaC.[27,28] Additionally, two general biological surveys were conducted on January 19 and February 17, 2023, to determine whether special-status plant species were present in the Study Area.

Based upon the literature review, field surveys, and professional experience and as further explained in the BRA, no special-status plant species occur or are expected to occur within the Study Area due to the absence of suitable habitat, previous land uses, and the extent and frequency of ground disturbance. Much of the Study Area has been previously utilized for former industrial operations, agriculture, and thus there has been ongoing disturbance from tilling, herbicide application, and competition from non-native species. For these reasons, the Study Area does not promote the establishment of or provide suitable conditions for rare plants, which are typically sensitive to these types of disturbances. Moreover, the Study Area lacks microhabitats such as vernal pools, chenopod scrub, and alkaline or acidic soils that are typically necessary to support many rare plants. For the reasons outlined above and detailed further in the BRA, it is reasonable to conclude that special-status plant species are determined to be absent from the site. Therefore, the proposed project would have no impact on special-status or rare plant species and no mitigation would be required.

[27] United States Geological Survey (USGS). 2023. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed December 11, 2024.

[28] California Department of Fish and Wildlife (CDFW). 2024. CNDDB RareFind 5 California Natural Diversity Database Query for Special-status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed December 11, 2024.

Special-status Wildlife Species

The Special-status Wildlife Species Evaluation (Table 3.4-3) identifies 27 federal and State-listed threatened and/or endangered wildlife species and State Species of Special Concern that have been documented within the *Chico, California* USGS Topographic Quadrangle Map and eight surrounding quadrangles by CNDDB and IpaC.[29,30] Eight species (Swainson's hawk [*Buteo swainsoni]*, burrowing owl [*Athene cunicularia]*, valley elderberry longhorn beetle [*Desmocerus californicus dimorphus]*, giant garter snake [*Thamnophis gigas]*, western pond turtle [*Emys marmorata*], pallid bat [*Antrozous pallidus]*, western mastiff bat [*Eumops perotis californicus]*, and western red bat [*Lasiurus blossevillii*]) were determined to have a potential to occur in the Study Area and are discussed in further detail below and in the BRA.

Swainson's Hawk

Within the BRSP area, nest sites have been documented along the Sacramento River, Feather River, Butte Creek, and other riparian corridors, as well as non-riparian habitats associated with farmlands. The nearest CNDDB record for nesting Swainson's hawk is approximately 2.4 miles south of the Study Area (CNDDB Occurrence No. 699). No Swainson's hawk nests were observed within the Study Area or within the immediate vicinity of the Study Area during the FCS field surveys. However, given recorded occurrences within dispersal distance and the existence of suitable nesting habitat in the form of several large trees near suitable foraging habitat present on properties adjacent to the Study Area, there is a moderate potential for this species to within the Study Area.

If a Swainson's hawk nest is active on or near the Study Area during construction, the proposed project could impact this species through direct harm through the destruction of active nests during tree removal activities and indirect harm through the generation of noise, light, and other disturbances during project construction and operation, which may cause this species to abandon its nests. Additionally, the project site will cease to be foraging habitat during operations due to the urbanization of the site, replacing current foraging edge conditions located at the City adjacent to the site with edges created by the BYSP. To reduce potential impacts on Swainson's hawk to less than significant levels under CEQA, the project applicant shall implement Mitigation Measure (MM) BIO-1a and MM BIO-1b, in accordance with the CDFW Guidelines.[31,32]

Burrowing Owl

The nearest CNDDB record of burrowing owl, a California Species of Special Concern, was documented approximately 2 miles east of the Study Area (CNDDB Occurrence No. 1029). This species has recently been named as a "candidate" species for protective status under CESA. No burrowing owls or signs of burrowing owl were observed during FCS field surveys. However, the ruderal and non-native grassland portions of the Study Area and burrows created by other species observed on-site could provide habitat for burrowing owls. Therefore, it cannot be ruled out that

[29] California Department of Fish and Wildlife (CDFW). 2024. CNDDB RareFind 5 California Natural Diversity Database Query for Special-status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed December 11, 2024.

[30] United States Fish and Wildlife Service (USFWS). 2023. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed October 21, 2024.

[31] California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Swainson's Hawk Technical Advisory Committee. Sacramento, California. May 31, 2000. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline. Accessed October 21, 2024.

[32] California Department of Fish and Wildlife (CDFW). 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. Sacramento, California. November 8.

burrowing owls may appear within the Study Area under certain circumstances before start of construction and could potentially be impacted by the proposed project.

If burrowing owls are present within the Study Area, construction could result in direct loss of burrowing owls or the degradation of burrowing owl habitat due to temporary construction impacts and increased human activity on the project site. Therefore, project implementation could potentially result in significant impacts to burrowing owls. However, with the implementation of MM BIO-2, impacts to the burrowing owls would be reduced to less than significant levels under CEQA.

Valley Elderberry Longhorn Beetle

VELB is listed as Threatened by the Endangered Species Act. This species is a member of the longhorn beetles (family Cerambidae). Males range in length from about 2 centimeters (about 0.5 inch to nearly 1 inch), measured from the front of the head to the end of the abdomen, with antennae about as long as their bodies. Females are slightly broader than males and have shorter antennae. Adult males have red-orange elytra (wing covers) with four elongated spots. Adult females have dark colored elytra. The species is nearly always found on or close to its host plant, red or blue elderberry, along rivers and streams. Females lay their eggs on the bark. Larvae hatch and burrow into the stems.[33] The Study Area is within the known range of this species.

Six elderberry shrubs, with DBHs from 4 to 42 inches were observed off-site growing along the northern bank of Comanche Creek adjacent to (but outside of) the boundary of the Southern Study Area. Exit holes consistent with the size and shape of VELB exit holes were observed within these shrubs. An additional on-site elderberry shrub with a DBH of 6 inches was observed within the southwestern corner of the BYSP Area. Exit holes consistent with the size and shape of VELB exit holes were observed within this individual shrub.

The nearest CNDDB record of this species is documented approximately 2.3 miles north of the Study Area (CNDDB Occurrence No. 291). Literature suggests that VELB are more likely to occur in riparian areas that contain dense stands of elderberry and typically do not disperse more than 800 meters (or 0.5 mile) from occupied elderberry trees.[34]

The outfall for the proposed project would be located within approximately 86 to 272 feet of the six off-site elderberry shrubs located along the northern bank of Comanche Creek, depending on the selected outfall location. Current or future permanent or temporary occupation of the elderberry clusters by VELB cannot be ruled out due to the cryptic nature of the species and its potential (current or future) presence in the vicinity of the Study Area. This determination is consistent with the recent USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS Framework), which considers riparian elderberry located within 165 feet of a project site within VELB range "suitable habitat, likely occupied," regardless of the current presence/absence of VELB exit holes.[35] Additionally, the buildout of the proposed project would directly impact the single elderberry shrub identified by the Arborist Survey Report (Exhibit 3-4.2a), which would need to be removed.

[33] United States Fish and Wildlife Service (USFWS). 2017. Species Information: Valley Elderberry Longhorn Beetle. Sacramento Fish and Wildlife Office. Website: https://www.fws.gov/species/valley-elderberry-longhorn-beetle-desmocerus-californicus-dimorphus. Accessed December 11, 2024.

[34] Talley, T.S., E. Fleishman, M. Holyoak, D.D. Murphy, and A. Ballard. 2007. Rethinking a rare species conservation strategy in an urban landscape: The case of the valley elderberry longhorn beetle. Biological Conservation.

[35] United States Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle.

The six off-site elderberry shrubs located along the northern bank of Comanche Creek would not be directly impacted by construction of the proposed outfall (Exhibit 3.4-2b). However, the construction of the proposed outfall could have indirect impacts on the six elderberry shrubs through the generation of dust that may coat and potentially adversely impact VELB, if present. The proposed project shall implement MM BIO-3a to mitigate any indirect impacts to VELB during construction of the proposed project to reduce indirect impacts to VELB to a less than significant level under CEQA. Additionally, the single elderberry shrub that was identified within the southwestern corner of the BYSP Area would be directly impacted due to its removal in order to implement the full buildout planned in the BYSP Area. Therefore, the proposed project shall implement MM BIO-3b and MM BIO-3c to reduce direct impacts to VELB to a less than significant level under CEQA.

Giant Garter Snake

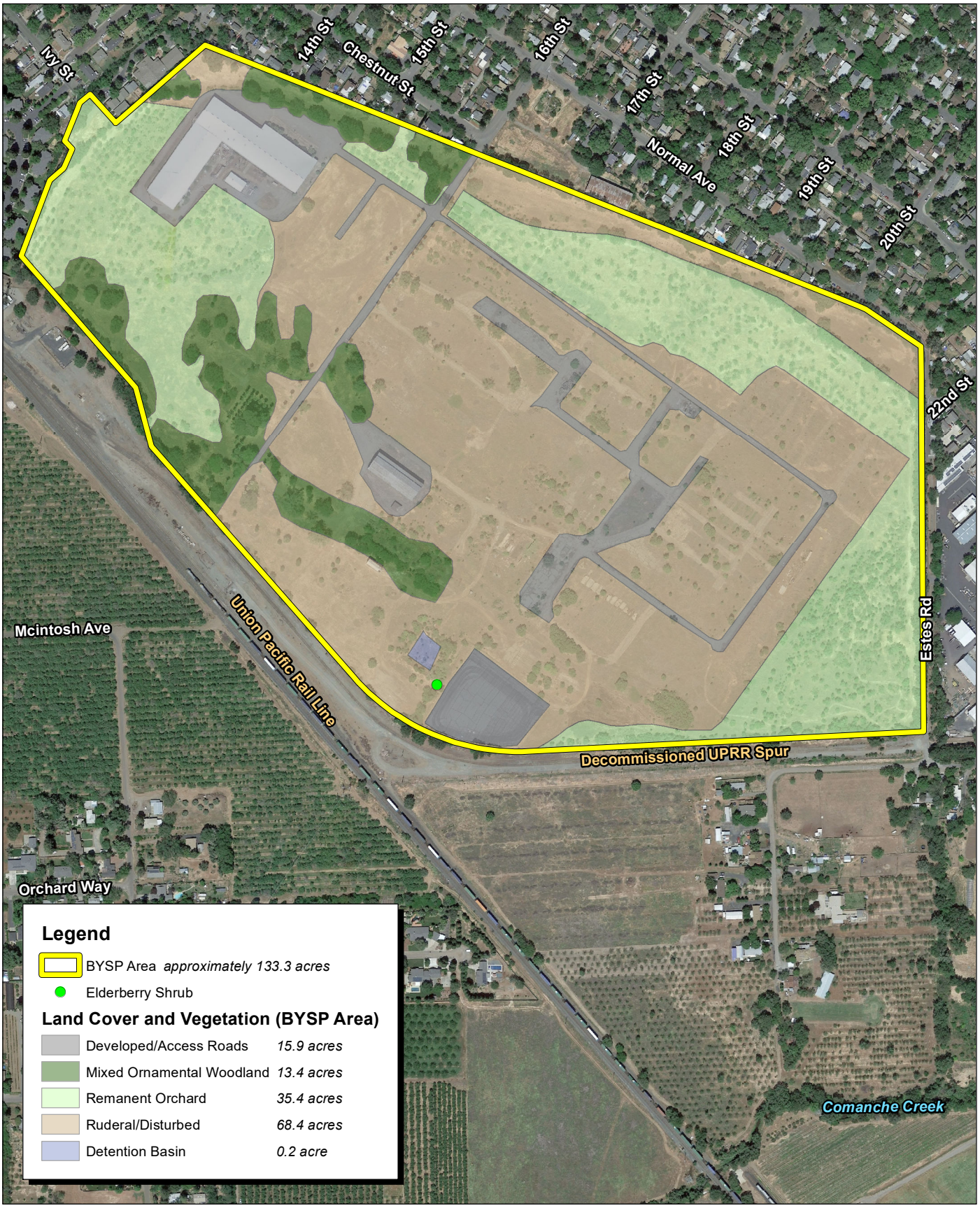
The giant garter snake (GGS) is listed as Threatened by the Endangered Species Act and CESA. The Study Area contains riparian habitat along Comanche Creek. Comanche Creek is considered by the USFWS to be a migration or travel corridor for GGS and is hydrologically connected to known GGS habitat in Butte Creek. Additionally, the top of the bank is dominated by disturbed and annual grassland and could provide marginal basking habitat.

The nearest recorded occurrence of GGS is located approximately 5 miles southwest of the Study Area (CNDDB Occurrence No. 235). Given the proposed project's construction activities near Comanche Creek and its riparian corridor related to outfall construction, it cannot be ruled out that the GGS may appear within the creek or adjacent upland habitat under certain circumstances before start of construction and could potentially be impacted by the proposed project.

Therefore, the proposed project would be required to implement MM BIO-4 to prevent any direct and indirect impacts to GGS during the construction of the proposed project. MM BIO-4 is based on the 1997 Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California, and through its implementation, impacts to GGS would be less than significant.

Western Pond Turtle

The western pond turtle (WPT), a California Species of Special Concern, was assessed as having the potential to occur within the Study Area. The nearest recorded occurrence of WPT is located approximately 1 mile east of the Study Area (CNDDB Occurrence No. 1227) within a pond to the north of Comanche Creek. Given potential project impacts to Comanche Creek and its riparian corridor from outfall construction, it cannot be ruled out that the WPT may appear within the creek or adjacent upland habitat under certain circumstances before start of construction and could potentially be impacted by the proposed project. If WPT are present within the Southern Study Area, construction could result in direct loss of WPT or the general degradation of habitat due to temporary construction impacts. Therefore, project implementation could potentially result in significant impacts to WPT. Impacts to western pond turtles would be reduced to less than significant through implementation of MM BIO-5.



Source: Google Earth Aerial Imagery. Butte County Association of Governments; and NorthStar, 05/2023.
ADEMA Environmental, 01/10/2024.

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Exhibit 3.4-2a
BYSP Area Biological Impacts

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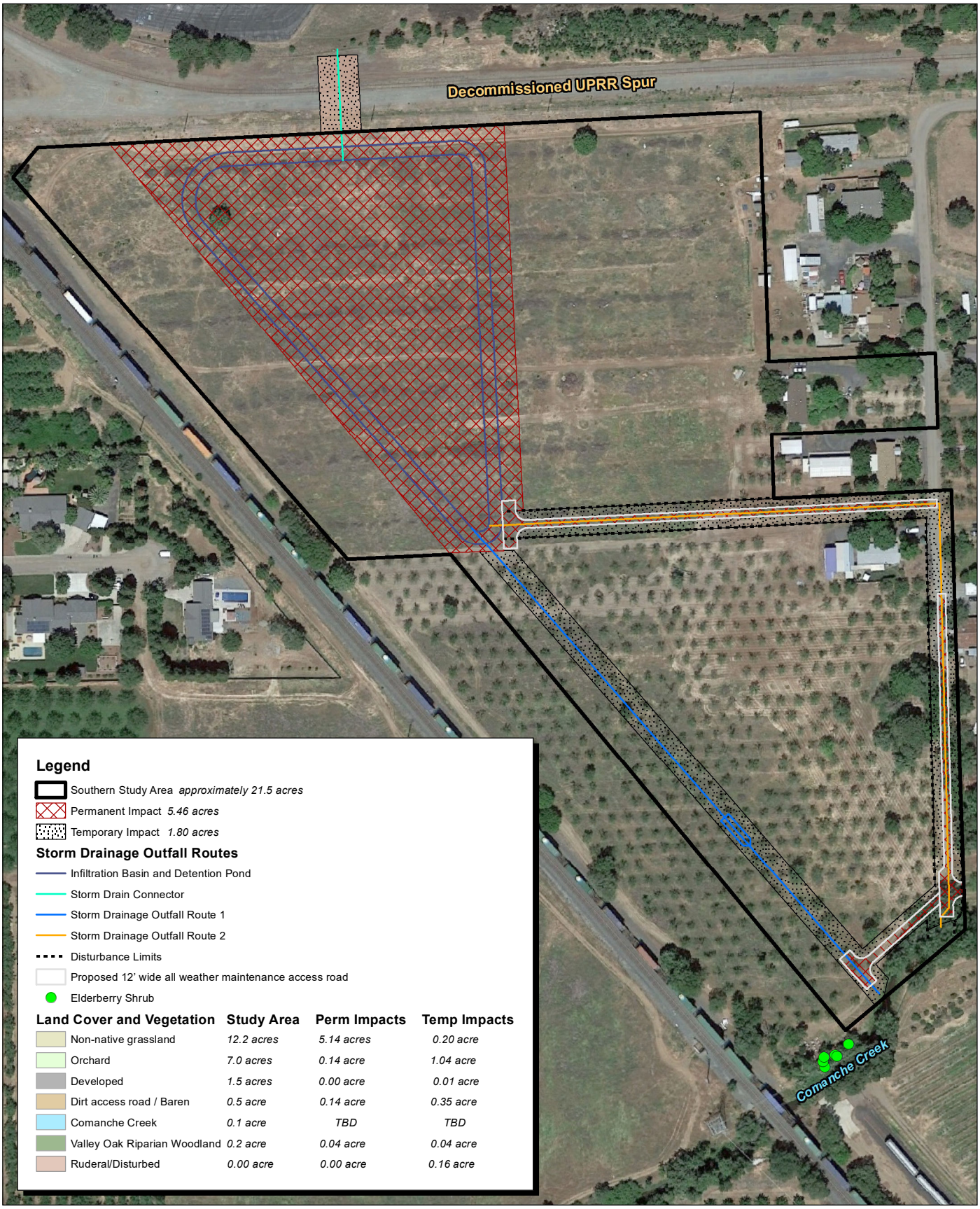

Source: Google Earth Aerial Imagery. Butte County Association of Governments; and NorthStar, 05/2023. ADEMA Environmental, 01/10/2024.

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Exhibit 3.4-2b
Southern Study Area Biological Impacts

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Protected Nesting Birds

The vegetated habitats within the Study Area and vicinity provide suitable nesting habitat for a variety of species of nesting birds protected under the MBTA and other special-status birds covered by Fish and Game Code Section 3503.5, and/or CESA. Construction activities that occur during the avian nesting season for protected nesting birds (generally February 1 to August 31) could disturb protected nesting sites within the construction footprint and within disturbance distance. Grading and the removal of vegetation during the nesting season could result in direct harm to nesting birds, while noise, light, and other construction-related disturbances could result in indirect harm to protected nesting birds adjacent to the vegetation removal areas that could abandon their nests.

With implementation of MM BIO-6, requiring pre-construction nesting bird surveys and avoidance of direct and indirect impacts on nests, potential project-related impacts on protected bird nests would be reduced to a less than significant level under CEQA.

Roosting Bats

The Study Area contains trees and buildings that could provide suitable bat roosting habitat, including for special-status bats such as the pallid bat, western mastiff bat, and western red bat. Potential direct and indirect impacts could occur to roosting bats due to removal of potential roosting habitat during project construction. These activities could potentially subject bats to risk of death or injury, and they are likely to avoid using the area until such construction activities have dissipated or ceased. Relocation, in turn, could cause hunger or stress among individual bats by displacing them into adjacent territories belonging to other individuals.

With implementation of MM BIO-7, requiring pre-construction roosting bat surveys and avoidance of direct and indirect impacts on active bat roosts, potential project-related impacts on protected roosting bats would be reduced to a less than significant level under CEQA.

Conclusion

Impacts to special-status, candidate, or sensitive species would be significant. However, with implementation of MM BIO-1a through MM BIO-7, the proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Therefore, with implementation of the proposed mitigation, project impacts would be less than significant.

Level of Significance Before Mitigation

Significant impact.

Mitigation Measures

MM BIO-1a Pre-construction Surveys for Swainson's Hawk (BYSP and Southern Study Area)

Prior to City (or County) approval of subdivision improvement plans or grading permits for ground disturbance for any individual development phase (within the BYSP or Southern Study Area) that occurs during the nesting season for Swainson's hawk, the developer shall hire a qualified Biologist to conduct Swainson's hawk

nesting surveys within a 0.5-mile radius of the subject area to determine whether there are any nests and if so, whether they are occupied. Occupancy shall be determined through observation of all accessible areas, including from public roads or other publicly accessible observation areas, of Swainson's hawk activity (e.g., foraging or nesting) on and near the project site.

If construction halts but does not cease for more than 1-year, general nesting bird surveys as described in MM BIO-6 are recommended for subsequent nesting seasons. However, if construction ceases for more than 1-year, Swainson's hawk pre-construction surveys in their entirety (as articulated in MM BIO-1a and 1b) must be repeated.

The qualified Biologist shall follow the survey protocol outlined in the California Department of Fish and Wildlife (CDFW) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* [36], which recommends surveys for at least two defined periods prior to construction, according to the following schedule:

I. **January—March 20:** Conduct one survey total. Survey shall be conducted all day.
II. **March 20—April 5:** Conduct three surveys total. Surveys shall be conducted between sunrise to 10:00 a.m. and 4:00 p.m. to sunset.
III. **April 5—April 20:** Conduct three surveys total. Surveys shall be conducted between sunrise to 12:00 p.m. and 4:30 p.m. to sunset.
IV. **April 21—June 10:** Avoid initiation of surveys during this period
V. **June 10—July 30:** (post-fledging) Conduct three surveys total. Surveys shall be conducted between sunrise to 12:00 p.m. and 4:00 p.m. to sunset.

MM BIO-1b Swainson's Hawk Avoidance and Minimization (BYSP and Southern Study Area)

If Swanson's hawk nests are located pursuant to MM BIO-1a and determined to be occupied, minimization measures shall be implemented by the developer for any individual development phase (within the BYSP or Southern Study Area) in connection with the subject individual development phase as follows:

1. Construction activities shall be prohibited within 200 yards (600 feet) of active and occupied Swainson's hawk nest(s), or within 200 yards (600 feet) of nests under construction, to prevent nest abandonment.[37]
2. Notwithstanding the foregoing, if site-specific conditions or the nature of the construction activity (e.g., other nearby development, steep topography, dense

[36] California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Sacramento, CA: Swainson's Hawk Technical Advisory Committee. May 31, 2000. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline. Accessed October 21, 2024.

[37] California Department of Fish and Wildlife (CDFW). 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Sacramento, CA: Swainson's Hawk Technical Advisory Committee. May 31, 2000. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990&inline. Accessed December 11, 2024.

vegetation, limited activities) indicate that a smaller buffer, or no buffer at all, could be used, the project applicant may seek approval from the qualified Biologist who in coordination with the California Department of Fish and Wildlife (CDFW) shall determine the appropriate buffer size, which, once approved, shall govern.

3. No tree containing an active Swainson's hawk nest shall be removed or altered; provided, however, once the nest is no longer occupied, said tree may be removed, subject to compliance with applicable provisions of the City of Chico's Tree Preservation Ordinance.

MM BIO-2 Pre-construction Surveys for Burrowing Owl (BYSP and Southern Study Area)

Prior to City (or County) approval of subdivision improvement plans or grading permits for ground disturbance for any individual development phase (within the BYSP and Southern Study Area), the developer shall hire a qualified Biologist to perform a pre-construction burrowing owl survey to determine burrow locations within 30 days prior to construction activities in connection with each individual development phase using applicable California Department of Fish and Wildlife (CDFW) Guidelines. Surveys for occupied burrows shall be completed within all construction areas in connection with the subject individual development phase and within 300 feet of the subject impact area (where feasible and appropriate based on locations of barren or ruderal habitats). At least 15 days prior to the expected start of any project-related ground disturbance activities in connection with the subject individual development phase, or the restart of activities related thereto, the relevant developer shall provide a burrowing owl survey report with mapping exhibits to the CDFW. If no burrowing owl are detected during the pre-construction survey, no further action in connection with the subject individual development proposal is necessary.

If burrowing owl are detected during the pre-construction survey, consultation with the US Fish and Wildlife Service as well as CDFW will be required and the following actions shall be taken to offset impacts during construction in connection with the subject individual development proposal (as outlined in the CDFW 2012 Guidelines):

- During the nonbreeding season (September 1 through January 31), no disturbance shall occur within an approximately 160-foot radius of an occupied burrow. During the nesting season (February 1 through August 31), occupied burrows shall not be disturbed within a 300-foot radius unless a qualified Biologist approved by the CDFW verifies through non-invasive methods that either (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- If owls must be moved away from the disturbance area, passive relocation techniques (as outlined by the CDFW [i.e., use of one-way doors]) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and to allow the owls to acclimate to alternate burrows.

- If unpaired owls or paired owls are present in or within 300 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction. A CDFW-approved exclusion plan shall be required to implement this measure.
- If paired owls are nesting in areas scheduled for disturbance or degradation, there shall be a minimum 300-foot buffer from the nest(s) from February 1 through August 31 or until fledging has occurred. Outside of the time period of February 1 through August 31 or following fledging, owls may be passively relocated.

MM BIO-3a Valley Elderberry Longhorn Beetle Avoidance and Minimization Measures (Southern Study Area)

Prior to City or County approval of subdivision improvement plans or grading permits for ground disturbance to construct the new outfall to Comanche Creek located within the Southern Study Area, the developer shall list the following measures on the relevant construction plans and hire a qualified Biologist to ensure adherence to the following measures during construction:

- **Dust Control and Fencing.** Above and along top of bank of Comanche Creek and between the off-site elderberry cluster and the subject construction site in connection with the proposed outfall, a dust screen shall be installed at a sufficient width and height as defined by a qualified Biologist to prevent excessive construction-generated dust from reaching the elderberry cluster in question. At a minimum, the dust screen shall be 100 feet wide and 6 feet tall.
- **Avoidance area.** Construction activities that may damage or kill the off-site elderberry cluster (e.g., trenching, paving, etc.) shall implement an avoidance area of at least 6 meters (20 feet) from the drip line of the subject elderberry cluster, depending on the type of activity, as determined by a qualified Biologist.
- **Worker education.** Prior to ground disturbance associated with the construction of the stormwater outfall, a qualified Biologist shall provide training for all contractors, work crews, and any on-site personnel on the status of the valley elderberry longhorn beetle (VELB), its host plant and habitat, the need to avoid damaging the off-site elderberry cluster, and the possible penalties for noncompliance.
- **Construction monitoring.** A qualified Biologist shall monitor the work area associated with the construction of the stormwater outfall at least once per day during outfall construction to ensure that all required avoidance and minimization measures are implemented. The amount and duration of monitoring shall depend on the project specifics and may be reduced with concurrence from the United States Fish and Wildlife Service.

- **Timing.** To the extent feasible, all construction activities that could occur within 50 meters (165 feet) of the off-site elderberry cluster, shall be conducted outside of the flight season of the VELB (March 1—July 30).

MM BIO-3b Transplant Directly Impacted On-Site Elderberry Shrub (BYSP Area)

Prior to City approval of subdivision improvement plans or grading permits for ground disturbance to develop the future lot containing the one elderberry shrub identified within the BYSP Area, the developer of the specific development proposal that involves the removal of the elderberry shrub shall transplant the elderberry shrub, including removal of the entire root ball, if feasible, as part of the transplant process. The elderberry shrub shall be relocated adjacent to the project footprint if, as determined by a qualified Biologist: (1) the planting location is suitable for elderberry growth and reproduction; and (2) the subject developer is able to protect the shrub after transplantation via protection fencing or buffers until it is ensured that the shrub becomes reestablished. If these criteria cannot be met, the shrub shall be transplanted to an appropriate USFWS-approved mitigation site. Provided, however, that if a qualified Biologist determines that the elderberry shrub is unlikely to survive transplanting because of poor condition or location, or the shrub would be extremely difficult to move because of access problems, then the elderberry shrub shall not be transplanted and no further mitigation under this MM BIO-3b shall be required.

The following transplanting guidelines shall be used by the subject developer in implementing this mitigation measure:

- **Monitor**. A qualified Biologist shall be on-site for the duration of transplanting activities to assure compliance with this mitigation measure.
- **Exit Holes**. Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, GPS location of the plant to be relocated, and the GPS location of where the plant is transplanted shall be reported to the USFWS and to the California Natural Diversity Database (CNDDB).
- **Timing**. Any transplanting of the elderberry shrub shall occur when the shrub is dormant (November through the first two weeks in February) and after it has lost its leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success.
- **Transplanting Procedure**. Any transplanting shall follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (http://www.tcia.org/).

MM BIO-3c Compensatory Mitigation for Valley Elderberry Longhorn Beetle Impacts (BYSP Area)

Prior to City approval of subdivision improvement plans or grading permits that will result in the removal or disturbance of the one elderberry shrub located within the BYSP Area, the subject developer shall compensate for the loss of the shrub by

purchasing one credit (1,800 square feet or 0.041 acre) of valley elderberry longhorn beetle (VELB) habitat at a mitigation bank approved by the United States Fish and Wildlife Service (USFWS). This compensatory mitigation is in addition to the transplanting requirement of MM BIO-3b. However, since it is within the purview of the USFWS to determine the appropriate type and amount of compensatory mitigation for impacts to VELB habitat, this mitigation measure shall be fulfilled upon the developer meeting final elderberry shrub mitigation requirements as determined by the USFWS.

MM BIO-4 Avoidance and Minimization Measures for Giant Garter Snake (Southern Study Area)

The giant garter snake (GGS) is unlikely to migrate to the BYSP Area from Comanche Creek, so the following avoidance and minimization measures for this species only apply to activities within the Southern Study Area. Prior to County approval of improvement plans or grading permits for the construction of the new outfall to Comanche Creek, the following measures shall be incorporated into project plans and then implemented to minimize potential impacts on GGS:

- To minimize any direct impacts to the species, construction activities within 200 feet of Comanche Creek shall be conducted, to the extent feasible, during the active season for GGS (between May 1 and October 1).
- Dewatered (removal of surface water or ground water from a riverbed or construction site by pumping or evaporation) portions of Comanche Creek after April 15 (if applicable) must remain dry for at least 15 consecutive days prior to excavation or filling of the dewatered habitat.
- Construction personnel in connection with the subject individual development proposal shall participate in a United States Fish and Wildlife Service (USFWS) approved worker environmental awareness training program prior to the initiation of ground disturbance within 200 feet of Comanche Creek. During the training, workers shall be informed of the potential for this species to be present and the associated habitat for GGS and that it is unlawful to take harm or harass GGS.
- 24 hours prior to construction activities within 200 feet of Comanche Creek, the subject area shall be surveyed for GGS by a qualified Biologist. Surveys of the subject area shall be repeated if a lapse in construction activity within the subject area of two weeks or more has occurred. If a snake is encountered during construction within the subject area, activities within 200 feet of this area shall cease until a qualified Biologist has determined that appropriate corrective measures have been completed such that the snake will not be harmed. The relevant project applicant shall report any known reported sightings and any known reported incidental take to the USFWS immediately by telephone at (916) 414-6600.
- The clearing of wetland vegetation (if any) shall be confined to the minimal area reasonably necessary to excavate the toe of bank for the proposed outfall and

riprap placement. Excavation equipment shall be located and operated from the top of the bank.

- With respect to construction activities occurring within 200 feet of Comanche Creek, movement of heavy equipment to and from the subject area shall be restricted to existing unimproved roadways to minimize habitat disturbance to the extent feasible and no staging or storing of equipment shall occur within 200 feet of Comanche Creek.

MM BIO-5 Pre-construction Surveys for Western Pond Turtle, includes avoidance and passive relocation if found (Southern Study Area)

The western pond turtle (WPT) is unlikely to migrate to the BYSP Area from Comanche Creek, so the following avoidance and minimization measures for this species only apply to activities within the Southern Study Area.

Prior to County approval of improvement plans or grading permits for the construction of the new outfall to Comanche Creek, the developer shall hire a qualified Biologist to conduct a focused survey for WPT 30 days prior to the onset of construction activities within the Southern Study Area to determine presence or absence of this species within 100 feet of the subject construction area, regardless of the time of year. If construction for the outfall occurs between April 1 and September 30, this survey shall include turtle nests. If WPT is found within the subject construction area, the qualified Biologist shall move the turtle to a location outside of the subject construction area to suitable habitat as determined by a qualified Biologist under consultation with the California Department of Fish and Wildlife (CDFW). If a nest is found within the subject construction area or within a 100-foot radius of the subject construction area, construction shall not take place within 100 feet of the nest until the turtles have hatched or the eggs have been moved to an appropriate location determined by the qualified Biologist under consultation with CDFW. Construction within 100 feet of Comanche Creek shall be avoided to the extent feasible when WPT adults and juveniles are overwintering (October 1 to February 29), because of the likelihood that turtle adults and juveniles could be present in upland habitats. If it is not feasible to avoid such construction activities during this time frame, an additional survey for overwintering locations shall be conducted no more than 14 days prior to construction within 100 feet of Comanche Creek in connection with the subject individual development proposal. If this species is found to be overwintering within the subject construction area, den locations shall be avoided until the area is unoccupied, as determined by a qualified Biologist under consultation with CDFW.

MM BIO-6 Protection of Active Bird Nests, including pre-construction survey and implementation of avoidance buffer, if found (BYSP and Southern Study Area).

Prior to City or County approval of improvement plans or grading permits that may result in the removal of trees, the following measures shall be taken to minimize the effects of tree removal on active bird nests:

- If a proposed development phase requires ground disturbance or vegetation removal to commence during the nesting season (February 1 to August 31), the developer shall hire a qualified Biologist to conduct pre-construction surveys within 7 days prior to the start of ground or vegetation disturbance (including tree removal) to determine whether or not active nests are present.
- If an active nest of a protected bird is located during pre-construction surveys, a qualified Biologist shall determine an appropriately sized avoidance buffer based on the species and anticipated disturbance level. The California Department of Fish and Wildlife [CDFW] recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors.) A qualified Biologist shall delineate the avoidance buffer using Environmentally Sensitive Area fencing, pin flags, and/or yellow caution tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently, as confirmed by a qualified Biologist. No construction activities or construction foot traffic is allowed to occur within the avoidance buffer(s).
- In consultation with the United States Fish and Wildlife Service (USFWS) or CDFW (as appropriate), the qualified Biologist shall monitor any active nest(s) during the subject construction activities and shall modify the protection zone accordingly if determined necessary to prevent project-related nest disturbance, until the young have fledged.

MM BIO-7 Roosting Bat Pre-construction Survey and Avoidance (BYSP and Southern Study Area)

Prior to City or County approval of improvement plans or grading permits for any phase of the project, the developer shall hire a qualified Biologist with relevant roosting bat experience to conduct a survey for the proposed impact area and a 250 foot buffer for special-status bats during the appropriate time of day to maximize detectability to determine whether bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction in connection with each individual development proposal. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (Anabat, etc.) as determined appropriate by the qualified Biologist.

If the Biologist determines or presumes bats are present (if there are site access issues or structural safety concerns) as a result of any of the foregoing survey(s), the relevant applicant shall ensure the following activities related to the subject proposal occur: the Biologist shall exclude the bats from suitable spaces by installing one-way exclusion devices. After the bats vacate the space, the Biologist shall close off the space to prevent recolonization. Bat house(s) shall be installed adjacent to any excluded roost(s) or as close as feasible, to be determined by a qualified wildlife

Biologist, to ensure excluded bats are provided adjacent roosting habitat. The relevant building demolition, ground disturbance, or other construction activities shall only commence after the Biologist verifies seven to 10 days later that the exclusion methods have successfully prevented bats from returning and that bats have vacated the bat house(s). To avoid impacts on non-volant (i.e., nonflying) bats, the Biologist shall only conduct bat exclusion and eviction from September 1 through March 31 (after maternity/pupping season). Exclusion efforts shall be restricted during periods of sensitive activity.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Natural Communities or Riparian Habitat

Impact BIO-2:	**The proposed project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service.**

Impact Analysis

Comanche Creek- Valley Oak Riparian Woodland

The southern boundary of the project site contains a portion of Comanche Creek which shows evidence of a bed, bank, and OHWM. The woody vegetation present along Comanche Creek can be best described as Valley Oak Riparian Woodland, given the dominate tree species consists of valley oak. Other trees and shrubs observed included black walnut, Himalayan blackberry (*Rubus armeniacus*), blue elderberry (*Sambucus nigra* ssp. *caerulea)*, and willows (*Salix* sp.). This community qualifies as California Sensitive Natural Community (71.045.00 Valley Oak Riparian Forest and Woodland).[38] Proposed activities would permanently impact 0.04-acre and temporarily impact 0.04-acre of Valley Oak Riparian Woodland through construction of the outfall structure. However, with implementation of MM BIO-8, which stipulates that the relevant applicant must obtain and file a Streambed Alteration Agreement, the applicant would be required to implement riparian habitat enhancements, and/or restore and revegetate the stream corridor habitat at no less than a 1:1 ratio, as determined by the CDFW. With implementation of MM BIO-8, impacts to this sensitive natural community would be less than significant.

Comanche Creek flows west where it joins Little Chico Creek and becomes Angel Slough. Angel Slough drains into Butte Creek which connects to the Sacramento River, which then flows into the Suisun Bay. Therefore, it is likely that Comanche Creek has a downstream connection to traditional navigable water (TNW). As such, Comanche Creek is likely a potential jurisdictional water of the United States, and a water of the State. It is also likely State and federally protected water pursuant the CWA, the Porter-Cologne Water Quality Control Act, and Fish and Game Code (Streambed Alteration Program, Section 1600-1616). The proposed project could temporarily impact the Creek

[38] California Department of Fish and Wildlife (CDFW). 2022. California Sensitive Natural Communities. Website: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline. Accessed October 21, 2024.

through erosion and riparian habitat loss, which would constitute a significant, albeit temporary, impact to the extent the foregoing are determined to be jurisdictional.

Impacts to this feature will require further evaluations when specific information (such as exact location and design) becomes available for the outfall. As such, the subject project applicant would be required to implement MM BIO-8, which requires a formal jurisdictional delineation to document and quantify the precise extent of jurisdictional waters within the Study Area and obtain resource agency permit(s) if required under applicable laws and regulations. A formal jurisdictional delineation is required for all potential jurisdictional features. As such, this includes the existing, on-site detention basin, although no riparian vegetation is present, and the Comanche Creek riparian corridor. For the riparian corridor, permits would require the implementation of erosion and bank stabilization measures, riparian habitat enhancement, and/or restoration and revegetation of the stream corridor habitat. To the extent the proposed project would impact a jurisdictional feature and thus trigger resource agency permitting, then the subject applicant would be required to consult and coordinate with the applicable regulatory agencies (USACE, RWQCB, and/or CDFW) to obtain the permit(s)/approval(s) required under the applicable provisions of the CWA, the Porter-Cologne Water Quality Control Act, and/or the California Fish and Game Code. With implementation of MM BIO-8, impacts to Comanche Creek and its associated riparian habitat will be less than significant.

Level of Significance Before Mitigation

Potential significant impact.

Mitigation Measures

MM BIO-8 Conduct Delineation of Potentially Jurisdictional Aquatic Resources (Creek and Detention Basin)

The relevant applicant in connection with the subject individual development proposal involving the installation of the outfall structure, shall complete a formal jurisdictional delineation to document and quantify the full extent of potentially jurisdictional waters within the relevant portions of the project site (if any) in coordination with the applicable resource agencies (United States Army Corps of Engineers [USACE] and/or Regional Water Quality Control Board [RWQCB]). If no resource agency jurisdiction is identified, then the relevant applicant constructing the outfall structure shall prepare a restoration and revegetation plan to offset the proposal's permanent impact to 0.04-acre and temporary impact to 0.04-acre of Valley Oak Riparian Woodland resulting from construction of the outfall structure, such that the stream corridor habitat is restored and revegetated at no less than a 1:1 ratio. The relevant applicant in connection with the subject individual development proposal involving the removal of the existing detention basin shall also coordinate, to the extent required under applicable laws and regulations, with the applicable resource agencies (USACE and/or RWQCB) to determine whether the detention basin within the project site is protected under Sections 404 and 401 of the Clean Water Act (CWA).

Obtain CWA Sections 401 and 404 Permits Prior to Construction (After Agency Coordination)

- The relevant applicant in connection with the subject individual development proposal involving the removal of the existing detention basin or the installation of the outfall shall comply with applicable laws and regulations including, if required, obtaining a Section 404 CWA permit for impacts to waters of the United States and a Section 401 Water Quality Certification from the RWQCB. Any such required permit and certification shall be obtained prior to issuance of grading permits in connection with the removal of the existing detention basin and/or the installation of the outfall structure, as relevant.
- If required pursuant to an approved Section 404 permit and 401 water quality certification under applicable laws and regulations, the relevant applicant in connection with the subject individual development proposal shall design said proposal to result in no net loss of functions and values of waters of the United States and State by incorporating impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as set forth in the subject Section 404 permit and 401 water quality certification.
- If required pursuant to an approved Section 404 permit and 401 water quality certification under applicable laws and regulations, compensatory mitigation shall be satisfied, which may consist of (1) obtaining credits from a mitigation bank; (2) making a payment to an in lieu fee program that would conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (3) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This final type of compensatory mitigation (i.e., #3) may be provided at or adjacent to the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). To the extent required pursuant to the approved Section 404 permit and 401 water quality certification under applicable laws and regulations, the relevant project/permit applicant shall retain responsibility for the implementation and success of the mitigation approach in connection with the subject individual development proposal.

Obtain Approval of and File Notification of Streambed Alteration Agreement Prior to Construction (After Agency Coordination)

In connection with an individual development proposal that involves the construction of the proposed outfall into Comanche Creek, the relevant applicant shall obtain and file a notification of a Streambed Alteration Agreement prior to conducting construction activities associated with the proposed outfall within Comanche Creek). If a Streambed Alteration Agreement is required under applicable laws and regulations, the relevant applicant shall implement all mitigation measures imposed by the CDFW related to the subject Streambed Alteration Agreement,

which may include but not be limited to the implementation of erosion and bank stabilization measures, riparian habitat enhancement, and/or restoration and revegetation of the stream corridor habitat at no less than a 1:1 ratio, as determined by the CDFW.

Level of Significance After Mitigation

Less than significant impact.

Wetlands and Jurisdictional Features

Impact BIO-3:	**The proposed project could have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Impact Analysis

Comanche Creek

Comanche Creek, as stated above, is likely State and federally protected pursuant to CWA Sections 404 and 401, the Porter-Cologne Water Quality Control Act, and Fish and Game Code (Streambed Alteration Program, Sections 1600—1616). Installation of the proposed outfall structure will require a determination of the extent of aquatic features regulated under the CWA, the Porter-Cologne Water Quality Control Act, and/or the California Fish and Game Code and the obtaining of any required resource agency permit(s) under applicable laws and regulations. With implementation of MM BIO-8, which requires restoration of the temporary disturbance area along Commanche Creek for the new outfall, impacts to Comanche Creek would be less than significant.

Detention Basin

The approximately 0.2-acre detention basin was constructed between 1947 and 1969. Based on the conditions observed during the field surveys, the basin was likely constructed in upland habitat and does not appear to have a connection to downstream waters. The manufactured basin has likely been non-functional for numerous years due to the vacant nature of the BYSP Area. For these reasons, the basin is likely not considered a water of the United States. However, it is possible that the detention basin may potentially qualify as a jurisdictional water of the United States and/or a water of the State and thus be potentially regulated by the USACE and the RWQCB, respectively. A final determination about the extent of jurisdictional waters (if any) of the United States with respect to the detention basin can only be made by the USACE, and final determination about the extent of jurisdictional waters of the State with respect to the detention basin can only be made by the RWQCB. Development of the proposed project would involve the removal of the detention basin. Since the detention basin is not considered a biologically sensitive resource, regardless of whether it is considered a water of the State or a water of the United States, removal of the manufactured feature in this case would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM BIO-8.

Level of Significance After Mitigation

Less than significant impact.

Fish and Wildlife Movement Corridors

Impact BIO-4: **The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors but could impede the use of wildlife nursery sites.**

Impact Analysis

As detailed more fully in the BRA (Appendix D), the Study Area is not within a designated wildlife corridor based on the Essential Connectivity Areas geospatial data set, which uses habitat modeling to identify areas of land with value as wildlife corridors. [39] The majority of the Study Area consists of partially vacant land that has been subject to varying degrees of human-caused disturbances for decades. The Study Area is directly bounded by urban development to the north and east and scattered, less dense urban development to the west which serve as significant barriers to movement of terrestrial species. The BYSP Area does not provide corridor functions beyond connecting similar lightly developed land parcels in the local surrounding areas. Therefore, the BYSP Area is not likely to function as a wildlife movement corridor.

Comanche Creek and the associated riparian habitat that flanks the creek south of the Study Area could function as a corridor for aquatic and terrestrial wildlife. The proposed project would not result in any permanent migration barriers with the Creek. With implementation of MM BIO- 8, which requires restoration of the temporary impacts to the banks of Comanche Creek, project impacts to wildlife movement corridors would be less than significant.

The Study Area does not contain native wildlife nursery sites. No significant breeding/nesting colonies were observed during the field surveys. However, individual nesting birds and roosting bats have the potential of being present on-site seasonally. Potential project-related impacts on active bird nests and bat roosts are analyzed and discussed under Impact BIO-1 and are considered potentially significant. However, implementation of MM BIO-6 and MM BIO-7 would avoid significant impacts on active bird nests and bat roosts by establishing protection zones if nests or roosts are found and would reduce this impact to less than significant.

Level of Significance Before Mitigation

Potentially significant impact with respect to wildlife nursery sites and migration barriers.

[39] California Department of Fish and Wildlife and California Department of Transportation. 2022. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. California Department of Fish and Wildlife, Sacramento, CA. Website: https://www.wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC. Accessed October 21, 2024.

Mitigation Measures

Implement MM BIO-6, MM BIO-7, and MM BIO-8.

Level of Significance After Mitigation

Less than significant impact.

Local Policies or Ordinances

Impact BIO-5:	**The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Impact Analysis

The City of Chico Municipal Code Chapter 16.66 sets forth the City's Tree Preservation Regulations. For the purposes of a conservative analysis, it is anticipated that all trees within the BYSP Area may be removed, except for trees within 10 feet of the BYSP Area boundary along the neighborhood to the northeast and east and existing palm trees along the 16th Street corridor. To the extent implementation of the proposed project would require tree removal, the subject applicant would be required to adhere to applicable provisions of the Tree Preservation Regulations and obtain permits to remove any trees subject to the chapter. Each tentative subdivision map and design review project in the BYSP Area would be required to show all trees subject to the Tree Preservation Regulations, information for each tree, and which specific trees are proposed for removal or retention based on the subdivision layout. The tree information would need to be provided, considered, and approved by the City pursuant to its local Tree Preservation Regulations. With adherence to Chapter 16.66 of the Municipal Code, the proposed project would ensure that no conflict would result with these regulations.

With respect to the off-site improvement area, no native trees were identified to be in the area proposed for permanent disturbance, although there are trees (including within the Valley Oak Woodland) within this area that may be subject to temporary disturbance (e.g., branch trimming, root zone invasion, soil compaction), along Comanche Creek. However, no native or sensitive riparian tree removal is anticipated within the off-site improvement area. Trees located within the off-site improvement area are located on County land and primarily consist of orchard trees. At the time of this writing, there is no County-related tree ordinance, and therefore no conflict would arise. To the extent there is construction within the off-site improvement area that would be covered by applicable resource agency permitting, any related tree protection requirements would be imposed thereon, thereby ensuring no conflict.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Habitat Conservation Plan

Impact BIO-6:	**The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.**

Impact Analysis

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan; therefore, the proposed project would have no impact in this regard.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No impact.

3.4.7 - Cumulative Impacts

The geographic scope for analyzing cumulative impacts with respect to biological resources includes the project site and within 0.5-mile of the project site (both City and County lands).

Special-status Species

Cumulative developments are predominantly located in areas that have already been built out or are located within highly fragmented habitats with limited potential to support special-status wildlife and plant species. The City of Chico has emphasized infill development since adoption of its 2030 General Plan in 2011, and BYSP stands to be the first of the City's five Special Planning Areas to be developed pursuant to the 2030 General Plan framework for growth areas. Thus, the cumulative geographic context being partially developed and partially agricultural generally lowers the likelihood of special-status wildlife and plants occurrences within the cumulative project areas. The exception to this is the riparian area along Comanche Creek.

Special-status species with the potential to occur within the cumulative project area include, but are not limited to, those species listed in the Special-Status Wildlife Species Evaluation Table in Appendix D.1. Additionally, nesting birds protected by the MBTA and/or California Fish and Game Code also have the potential to occur within the cumulative project areas. As described in the Regulatory Setting section, numerous laws and regulations are in place to protect biological resources within the cumulative project area, including, but not limited to the Endangered Species Act, CESA, and the CWA.

Cumulative projects within the cumulative geographic context would be required to comply with applicable federal, State, and local laws, regulations, and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on

biological resources. Among other things, cumulative projects would be required to adhere to standard pre-construction surveys and avoidance procedures would be required for projects with the potential to impact special-status wildlife species (similar to those measures set forth in MM BIO-1a through MM BIO-7). Because cumulative development would be required to comply with the above requirements, as well as General Plan and Municipal Code requirements (as described in Regulatory Framework Section 3.4.3), cumulative biological resource impacts related to special-status species would be less than significant. Similarly, with the compliance with the comprehensive regulatory framework described above and the implementation of MM BIO-1a through MM BIO-7, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact. Therefore, potential cumulative impacts would be less than significant.

Sensitive Natural Communities or Riparian Habitat

Within the cumulative project areas, development would not directly and significantly impact riparian habitat or other sensitive natural communities because they are largely located in previously developed or disturbed areas. Cumulative projects within the cumulative geographic context would be required to comply with applicable federal, State, and local laws, regulations, and policies relating to riparian habitat or other sensitive natural communities. Additionally, cumulative developments would be required to implement applicable General Plan and Municipal Code requirements (as described in Regulatory Framework Section 3.4.3).

Comanche Creek and Valley Oak Woodland are sensitive natural communities that exist on the boundaries of the project site. Cumulative projects in the vicinity would be required to adhere to requirements under the same comprehensive regulatory scheme, including, among others, the CWA Sections 404/401 and Section 1600 of California Fish and Game Code, which would minimize impacts to sensitive natural communities on the proposed project site. Similarly, with the compliance with the comprehensive regulatory framework described above and the implementation of MM BIO-8 to restore temporary construction impacts, Comanche Creek and Valley Oak Woodland would not be significantly impacted by proposed project. Therefore, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact on sensitive natural communities and riparian habitat.

State or Federally Protected Waters and Wetlands

Within the cumulative project areas, development would not be expected to directly and significantly impact protected waters and wetlands because they are largely located in previously developed or disturbed areas.

While Comanche Creek, segments of which are within the project site and vicinity, may potentially be jurisdictional in nature, cumulative projects in the vicinity of Comanche Creek would be required to adhere to requirements under the comprehensive regulatory scheme, including, among others, the CWA Sections 404/401 and Section 1600 of California Fish and Game Code to the extent any such cumulative developments would impact Comanche Creek or any other features determined to be jurisdictional. This would reduce impacts in this regard to less than significant levels.

In summary, cumulative projects with the potential to impact wetlands, other waters, or riparian habitat would be subject to a robust regulatory scheme and thus would be required to consult with the applicable regulatory agencies, quantify their potential impacts in a formal jurisdictional delineation, obtain any required permit(s)/approvals, and mitigate accordingly as may be required pursuant to applicable laws and regulations. As such, there is a less than significant cumulative impact.

Comanche Creek, bordering the project site, and a detention basin, within the project site, may be considered State or federally protected aquatic resources pursuant CWA Sections 404/401. The proposed project would avoid direct and indirect impacts to State or federally protected waters and wetlands through implementation of MM BIO-8. Therefore, the development of the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impacts on State- or federally protected waters and wetlands.

Local Policies or Ordinances

It is reasonably foreseeable that cumulative projects identified in Table 3.4-1 may result in the removal of trees; however, these projects would be governed by applicable local tree protection ordinance including the City's Street Tree Ordinance and relevant General Plan policies and would be required to adhere with all such requirements. This would ensure no conflict with any local protective policies or ordinances and thus constitute a less than significant cumulative impact.

Similarly, with respect to the proposed project would be required to adhere to all applicable local Tree Preservation Regulations and policies, which would ensure no conflicts with local tree policies or ordinances protecting trees or other biological resources. As such, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact.

Fish and Wildlife Movement Corridors and Wildlife Nurseries

The cumulatively considerable projects listed in Table 3.4-1 are predominantly located in areas that have already been built out or have limited potential to support wildlife corridors. Nonetheless, cumulative projects within the cumulative geographic context would be required to comply with applicable General Plan Policies and Municipal Code requirements (as described in Regulatory Framework Section 3.4.3) that protect fish and wildlife movement corridors. With implementation of these policies, cumulative projects would result in a less than significant cumulative impact to fish and wildlife movement corridors.

With respect to the proposed project, the project site does not function as a wildlife corridor, would not impede any movement within Comanche Creek and with implementation of MM BIO-8, would not significantly impact any wildlife nursery sites. Therefore, the implementation of the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

3.5 - Cultural Resources and Tribal Cultural Resources

3.5.1 - Introduction

This section describes the existing cultural resources and Tribal Cultural Resources (TCRs) setting and potential effects from project implementation on the project site and its surrounding area. This analysis is, in part, based on a Phase I Cultural Resources Assessment (Phase I CRA) prepared by FirstCarbon Solutions (FCS) in April 2024 as well as a Historic Built Environment Survey Report prepared by South Environmental in February 2023, both of which are included in Appendix C.

The following public comments pertaining to cultural resources and TCRs were received in response to the Notice of Preparation (NOP):

- The Draft Environmental Impact Report (Draft EIR) should analyze the proposed project's consistency with Assembly Bill (AB) 52 and Senate Bill (SB) 18.
- The lead agency should consult with applicable California Native American Tribes.
- A Cultural Resources Assessment should include applicable record searches, a field survey, and measures for inadvertent discovery of cultural and tribal cultural resources.

3.5.2 - Environmental Setting

Overview

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Tribal Cultural Resources:** TCRs include sites, features, places, or objects that are of cultural value to one or more California Native American Tribes.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

Cultural Setting

Following is a brief overview of the prehistory, ethnography, and historic background, providing a context in which to understand the background and relevance of sites found in the general project vicinity. This section is not intended to be a comprehensive review of the current academic resources available; rather, it serves as a general overview. Unless otherwise stated, information contained in this section is drawn directly from the Phase I CRA conducted by FCS.

Prehistory

In general, archaeological research in the greater San Francisco Bay Area and Northern California has focused on coastal areas, where large shellmounds were relatively easily identified on the landscape. This research and its chronological framework, however, is relevant to and has a bearing on our understanding of prehistory in areas adjacent to the San Francisco Bay, including modern Butte County.

The San Francisco Bay Area supported a dense population of hunter-gatherers over thousands of years, leaving a rich and varied archaeological record. The greater Bay Area was a place of incredible language diversity, with seven languages spoken at the time of Spanish settlement in 1776. The diverse ecosystem of the San Francisco Bay and surrounding lands supported an average of three to five persons per square mile but reached 11 persons per square mile in the North Bay. At the time of Spanish contact, the people of the Bay Area were organized into local Tribelets that defended fixed territories under independent leaders. Typically, individual Bay Area Tribelets included 200 to 400 people distributed among three to five semi-permanent villages, within territories measuring approximately 10 to 12 miles in diameter.

Native American occupation and use of the greater Bay Area, including the regions comprising Concord and Oakley, extended over 5,000-7,000 years and may be longer. Early archaeological investigations in Central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area. The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, the University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on a variation of inter-site assemblages. Research during the 1930s identified temporal periods in Central California prehistory and provided an initial chronological sequence. In 1939, researcher Jeremiah Lillard of Sacramento Junior College noted that each cultural period led directly to the next and that influences spread from the Delta region to the regions in Central California. In the late 1940s and early 1950s, researcher Richard Beardsley of the University of California Berkeley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession.

To address some of the flaws in the CCTS system, D.A. Fredrickson introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (12,000 to 8000 years Before Present [BP]; Lower, Middle, and Upper Archaic [8000 to 1500 BP], and Emergent [Upper and Lower, 1500 to 250 BP]). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence. In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmiller Pattern or Early Horizon (4500 to 3500 BP)
- Berkeley Pattern or Middle Horizon (3500 to 1500 BP)
- Augustine Pattern or Late Horizon (1500 to 250 BP)

Brief descriptions of these temporal ranges and their unique characteristics follow.

3.5.3 - Windmiller Pattern or Early Horizon (4500 to 3500 BP)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species. Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicate an extensive trade network that may represent the arrival of Utian populations into Central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads, and charmstones that usually were perforated.

3.5.4 - Berkeley Pattern or Middle Horizon (3500 to 1500 BP)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time. Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual. During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to Fredrickson, the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

3.5.5 - Augustine Pattern or Late Horizon (1500 to 250 BP)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation. Judging from the number and types of grave goods associated with the two

types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Research indicates that Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations. Although debate continues over a single model or sequence for Central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

The Maidu

Historically, the project site is within a broader region occupied by Native American peoples known as the Maidu. The Maidu had three distinctive linguistic and cultural groups, which also coincided with their geographical locations. These groups included: the Mountain or Northeastern Maidu, the Konkow or Northwestern Maidu, and the Nisenan or Southern Maidu. The original inhabitants in the Chico area were the Konkow (Koyom'kawi/Concow) branch, specifically, the Mechoopda. Their main settlement, Mikćapdo, was located on Little Butte Creek, 4 miles south of what is now downtown Chico.

Ethnographic literature suggests that political organization within Maidu communities was based on a settlement pattern of villages. A central village included a circular, semi-subterranean assembly structure 20 feet in diameter, now commonly referred to as a roundhouse. A community was composed of three to five villages, and villages were relatively self-sufficient Mechoopda villages consisted of about 20 homes and housed on average a total of 150–175 persons.

The fundamental basis of the Maidu economy was subsistence hunting, fishing, and collection of plant foods. Acorns were a dietary staple and were typically collected from oak groves at lower elevations. Heavily utilized oak varieties included black oak (*Quercus kelloggii*), canyon or golden oak (*Q. chrysolepis*), and interior live oak (*Q. wislizenii*). An annual crop of acorns could provide sustenance for a village for 2 years. Similar to other Sierra foothill groups, the Mechoopda and other Maidu groups maintained individual or family-level ownership of oak trees and the acorns they produced. Other dietary resources included hazelnuts, buckeye, wild nutmeg, grass seeds, berries, various underground roots and bulbs, salmon, eel, birds/waterfowl, grasshoppers, and other insects. They also hunted large game animals including deer, elk, bear, and small mammals such as ground squirrels and jackrabbits, the latter of which were herded into long stretches of netting. Women gathered and prepared a wide array of vegetal crops. Roots, corms, bulbs, lupine greens, and clover greens were harvested in the spring. Numerous small plant seeds were gathered in the summer, as were blackberries.

A wide variety of tools and implements were employed to gather and process food resources. Among these were the bow and arrow, traps, nets, slings, snares, clubs, and blinds for hunting land

mammals and birds, and salmon gigs, traps, and nets for fishing. Woven tools, including seed beaters, burden baskets, and carrying nets, as well as sharpened digging sticks, were used to collect plant resources. Baskets were either coiled or twined. Snowshoes were used for winter travel, and dugout canoes or log rafts were used for navigating or crossing the mountain waterways.

Prior to the discovery of gold in 1848 at Sutter's Mill near Coloma on the American River, the Mechoopda were little affected by European exploration. Their territory was encroached upon occasionally by Spanish explorers and American trappers. From 1828 to 1836, trappers and hunters from the Hudson Bay Company entered the region. Their activities depleted the mammalian population of the region. In 1833, a party under the direction of Michael La Framboise reported killing 395 elk, 17 bears, and eight antelopes in Sutter Butte.

With the discovery of gold in 1848, tens of thousands of fortune seekers entered the region and with them, the mass introduction of diseases into California native populations. A great epidemic swept the Sacramento Valley in 1833 and all but decimated the Mechoopda. While there were no official extermination programs, the spread of disease and direct acts of violence inflicted on the Maidu were devastating, as was the loss of land and territory, including traditional hunting and gathering locales. An estimated 75 percent of the Mechoopda population perished due to the introduction of diseases such as smallpox.

Historic Background

The history of Northern California can be divided into several periods of influence; pertinent historic periods are briefly summarized below.

The Spanish Period (1769–1821)

The Eastern Miwok first came into contact with European explorers during the sixteenth century beginning with Sir Francis Drake's expedition in 1579, followed by Sebastián Rodriquez Cermeño in 1595. It is not until the later part of the eighteenth century that Europeans (primarily the Spanish) return to the region. Spanish colonial policy from 1769-1821 was directed at the founding of presidios, missions, and secular towns, with the land held by the Crown. The establishment of the Spanish Mission system brought drastic and permanent changes to the Coast Miwok way of life. By the early 1800s, the mission fathers began a process of cultural change that brought the majority of the local Native Americans into the missions. At the expense of traditional skills, the neophytes were taught the pastoral and horticultural skills of the Hispanic tradition. Spanish missionaries traveled into the Valley to recapture escaped neophytes and recruit inland Native Americans for coastal missions, such as nearby Mission San Rafael, which was established in 1817. In 1834, the Mission system was officially secularized, and the majority of the mission Native American population dispersed to local ranches, villages, or nearby pueblos. Following the collapse of the Mission system, many of the local Native Americans returned to Northern California, bringing with them language and agricultural practices learned from the Spanish. During the latter half of the nineteenth century, the size of all Coast Miwok populations dwindled dramatically, due to the spread of European settlements and the diseases the Europeans brought with them.

The Mexican Period (1821–1848)

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the native population continued to decline. Anglo-American settlers began to arrive in Alta California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of Alta California was 8,000 non-natives and 10,000 natives. However, these estimates have been debated. Researchers believe the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.

Euro-American Expansion

During this period, and prior, Native American populations were declining rapidly because of an influx of Euro-American diseases. In 1832, a party of trappers from the Hudson's Bay Company, led by John Work, traveled down the Sacramento River unintentionally spreading a malaria epidemic to Native Californians. Four years later, a smallpox epidemic decimated local populations, and it is estimated that up to 75 percent of the native population died.

After the upheaval of the Bear Flag Revolt in 1846, and the result of the Treaty of Guadalupe Hidalgo in 1848, California became a United States territory. In 1848, James W. Marshall discovered gold at Coloma in modern-day El Dorado County, which started the California Gold Rush into the region that forever altered the course of California's history. The arrival of thousands of gold seekers in the territory contributed to the exploration and settlement of the entire State. By late 1848, approximately four out of five men in California were gold miners.

The California Gold Rush originated along the reaches of the American River and other tributaries to the Sacramento River, and Hangtown, present-day Placerville, became the closest town offering mining supplies and other necessities for the miners in El Dorado County. Gold subsequently was found in the tributaries to the San Joaquin River, which flowed north to join the Sacramento River in the Great Delta east of San Francisco Bay.

By 1864, the California Gold Rush had essentially ended. The rich surface and river placers were largely exhausted and the miners either returned to their homelands or stayed to start new lives in California. After the Gold Rush, people in towns such as Jackson, Placerville, and Sonora turned to other means of commerce, such as ranching, agriculture, and timber production. With the decline of gold mining, agriculture and ranching came to the forefront in the State's economy. California's natural resources and moderate climate proved well-suited for cultivation of a variety of fruits, nuts, vegetables, and grains.

Local History Butte County

The following historical section on the City of Chico is an excerpt from Samantha Murray's California Department of Parks and Recreation (DPR) form for the Engineering Building and Match Block Storage Building of the Diamond Match Company.

Home to the Maidu and Patwin Native American Tribes, the end of the Mexican-American War brought settlers to the region seeking land grants. In 1843, two men came from Sacramento (known then as Sutter's Fort) to the present-day Chico area on a hunting expedition. Edward A. Farwell and William Dickey were interested in obtaining land grants in the area and were successful. Farwell chose the land to the south of the Sacramento River, and Dickey chose the land to the north. Dickey named his land Arroyo Chico, meaning small creek. Their land grant would become part of Butte County, which was incorporated February 18, 1850, making it one of the original 19 counties in California.

During the same period, General John Bidwell visited the future area of Chico and purchased land from Dickey and Farwell. Bidwell was born in New York in 1819 and spent his childhood working on his father's farm. When he was 19, he moved west to Ohio where he settled as a school master for two years. Following his time in Ohio, he continued west to Missouri and settled on a plot of land on the west side of the Missouri River. However, while Bidwell was on a trip to St. Louis, a claim jumper built a cabin on his land in Missouri and forced him out. Unable to reclaim his land, Bidwell continued further west to California and met with John Sutter in Sacramento. Bidwell pioneered one of the first successful emigrant parties of Americans to the State of California. Bidwell worked as a business manager for Sutter at Sutter's Fort where he worked for several years before becoming a naturalized Mexican citizen.

After the end of Bidwell's military service, he returned to Sutter's Mill near Coloma in Northern California. In 1848 gold was discovered on the banks of the South Fork of the American River. This prompted Bidwell to seek out gold in neighboring areas, and he went on to discover traces of gold on the Feather River near Oroville, California. Bidwell acquired a sizable fortune from his mining efforts and founded Bidwell's Bar, a bar that served the small prosperous City that resulted from the discovery of gold. This bar still exists below the Oroville Reservoir. In 1849, Bidwell returned to the Rancho Arroyo Chico and purchased half of Dickey's land, and in 1851, he purchased the second half. In 1849, Bidwell constructed the first house in Chico that would be destroyed by fire in 1852 and rebuilt as "Bidwell's Adobe" (no longer extant) along an old pack trail that would go on to become the Marysville Shasta Road, used by miners and explorers who searched for gold in the Sacramento Valley. The adobe also included a small store, establishing itself as Chico's first commercial market. The first United States mail service arrived in Chico in 1851 and the town's first postmaster was A.H. Barber.

Before the start of the 1860s, all the developments south of Chico Creek were located on Bidwell's land. In 1860, things changed when Bidwell commissioned the town-plat of Chico by the Butte County surveyor, J.S. Henning. By 1861, the first brick and mortar store was constructed on the corner of First and Main Streets by E.B. Pond, a developer who moved to the area. Another developer, Richard Breese, moved to town and built a house, which encouraged others to develop

the area. Chico became a new start for those individuals leaving the mining camps and small settlements in the foothills who intended to begin new agricultural pursuits.

Bidwell was also known for his philanthropic efforts in the early years of Chico. He donated land to schools and congregations such as Woodman's Academy, Chico's most prominent private school that opened in 1862 on Block 81. Jane H. Voorhees was the first teacher and Chico's first public school was built in 1866, serving the area for almost a century and was named the Salem Street School. One additional school not built on Bidwell's donated land was the Oakdale School building that opened in 1874 and operated until the late 1940s. In 1868, construction was completed on the Bidwell Mansion, the home General Bidwell and his wife Annie would live in from the time of their marriage until the end of their lives. Henry. W. Cleveland was the architect of the house.

Throughout the 1860s, Chico would go on to become the principal market for wheat that serviced all of Butte County. The acreage dedicated to wheat increased rapidly during this time and created a trade that boosted the local economy. In 1864, Chico's population was 500 and several small businesses began to fill the City streets including a brewery, law office, and a tin and stove store. In 1870, things changed for Chico due to the construction of the Oregon and California Railroad. Prior to the use of the railroad, traders relied on the Sacramento River, 6 miles away from town, and horse and wagons to transport their goods and conduct business operations with other local cities. The railroad created a more efficient trade route, which led to more rapid development in Chico and Butte County. The County went on to become a leader in pine production and soon constructed five lumber yards; two mills; a foundry; two blacksmith shops; five harness makers; three livery stables; two wagon makers; one brewery; one sash, door, and blind factory; and 13 saloons.

The City of Chico was officially incorporated in 1872. General Bidwell continued his philanthropic efforts by donating a lot on Main Street, known at that time as the station house, to serve as the site for City Hall. A 2-story station house was built on the site, with the main floor containing six large rooms to function as offices, and three cells to hold public offenders, and a second-floor functioning primarily as a large room for public meetings. In 1974, Bidwell also donated a park to the City of Chico, which was intended to be the site of a county courthouse. However, he failed to secure Chico as the county seat and a courthouse was never built. The park instead became the center of downtown.

During the 1870s, lumber replaced wheat production as the main industry for the area. This prosperity had a significant impact on the architectural development in the area. For more than a decade the lumber industry provided accessible building material for local construction endeavors, accelerating the development of Chico. However, this was hindered by a series of fires in the 1870s that nearly destroyed a large portion of wooden buildings in Chico. From this point forward, the City required new buildings to be constructed of fire resistant brick. The fires also led to the establishment of Chico's first volunteer fire company.

In 1871, Chico Flume and Lumber Company set up two sawmills along Big Chico Creek. In 1875, they changed names to the Sierra Flume and Lumber Company and would go on to become the largest lumber enterprise in the world by 1877. However, this rapid success happened too fast, and by the turn of the century, the Company was in financial trouble and needed to sell the Company land it

had acquired in Chico. At the same time that the Sierra Flume and Lumber Company began to fail, the Diamond Match Company began to achieve success. In 1901, the Chico Investment Company facilitated the transition of the Sierra Flume and Lumber land to the Diamond Match Company. The facilitation and establishment of the Chico Investment Company was the work of several key executives of the Diamond Match Company, most notably John Heard Comstock and Fred M. Clough. Once under the ownership of the Diamond Match Company, Clough was appointed the first Pacific Coast manager for the Diamond Match Company. The Chico location opened in 1903, and in 1904 and 1905, buildings were constructed to support operations at this facility. The site had multiple buildings, yards, and a machine shop. The Diamond Match Company would be an industrial fixture for Chico until the sale of the plant in 1984 and its closure in 1989.

Industrialization and the arrival of the railroads influenced development in Chico, but agriculture still played a significant role in the economic system for the City throughout the nineteenth and twentieth centuries. In the 1870s, farmers in Chico were producing a variety of crops, including wheat, barley, almonds, figs, and a variety of fruits. In the 1880s, barley became an important crop to the local economy when it was used for the Chico Brewery. The variety of plants and products produced not only in Chico, but also throughout California greatly increased due to the City being chosen to be a U.S. Agricultural Experiment Station. The success and diversification of crops in cities like Chico would prove to be key to efforts in World War I, as Chico became a huge contributor of food for the war effort. An example of this is seen with the explosion of the rice industry from its introduction in Chico in 1910 to the end of World War I in 1918, when Butte County grew 30,000 acres of rice.

Agricultural support services such as canning, drying, and packing also became a significant contributor to the growth and development of the area. The industry was taken to a new level with the establishment of CalPak/Del Monte Plant #64 in Chico in 1919. CalPak/Del Monte was a very successful canning and fruit processing company in California that started in 1916 and had a significant effect on cities like Chico. The Company created jobs for people in the processing sector of agriculture instead of the traditional farming sector and played an important role in the agricultural sector throughout most of the twentieth century. The major function of the Chico plant was the packaging of prunes and apricots starting in 1919.

By the 1920s, Chico had taken steps to make itself a modern city with the creation of paved streets, increased suburban development, public parks, and the planning of State Highway 99. In the 1920s, the City paved streets and removed wooden sidewalks. The City's growth in the early twentieth century began to shift away from its agricultural roots and became more urbanized. By 1920, the County's population was 15,517 and 42.2 percent of the population was considered urban. In comparison, in 1910 the population was 27.9 percent urban and only 15.34 percent urban in 1900.

While the population shifted to the focus of urbanization, so did the architecture and the landscape of Chico. In 1905, Annie Bidwell donated Bidwell Park to the City, which encompasses more than 1,900 acres for public use. This large public park cuts through the northeastern part of the City and continues to serve as a public open space. In 1913, healthcare advancements led to the opening of Enloe Hospital which sparked additional healthcare center developments throughout the rest of the twentieth century. In 1916, the Chico Municipal Building was constructed and created the

framework for a City plaza, along with the post office, in the downtown area. Another shift in downtown also occurred in the form of businesses removing wooden awnings and posts from their storefronts and creating more open sidewalks and streetscape. There were also various movie productions filmed in Chico in the early twentieth century, including *Robin Hood*, *Gone with the Wind*, *Kane*, *Last of the Cowboys*, *Folly of a Life of Crime*, and *Alamo Charlie*. With all of the City's modernization, it aspired to be the new county seat for Butte County in the 1914 race, however, this goal was not realized.

Chico also continued to advance due to the introduction of aviation to the region when a municipal airport was planned to be constructed in 1935 immediately north of the City. However, these plans halted due to World War II when the land was leased by the War Department to establish an Army Corps base. This ended up having a significant impact on Chico's residential and commercial development patterns and brought many new people to the area who were employed and trained at the base. At the height of its use, the Army base employed 4,000 people, and thousands of people received basic training or support training at the facility. When the base closed in 1945, many of the people who came to the area decided to permanently relocate to Chico. This resulted in a local population boom, leading to the quick and cost-effective construction of housing, with one of the most popular options being ranch style homes. This development and suburbanization continued throughout the 1940s and 1950s, leading to the need to also construct churches, schools, service stations, and infrastructure improvements for the streets and parking.

In the late 1940s, a Greyhound Depot was built in Chico to provide bus transportation to and from the area. The Hotel Oaks was constructed downtown and was Chico's only 6-story building at the time. California State University, Chico gained a rapid influx of students in 1960 as the first wave of baby boomers began enrolling. The University underwent an expansion in 1975 to accommodate the higher levels of enrollment and modernize the campus with buildings such as a Performing Arts Center. Several improvements were made to Bidwell Park during the mid-to-late-century to provide greater recreation opportunities for new residents, including the construction of a bath house and new playground at the One Mile Recreation Area. In 1964, the Bidwell Mansion was acquired by the California State Park System from California State University, Chico, who designated it as a Historical Monument and created a small city park surrounding it called the Bidwell Mansion State Historic Park. In 1981, the Chico Heritage Association was incorporated to promote the historic preservation of the historical downtown areas of the City. The organization has been successful in completing a survey of buildings in Chico to identify them for potential historical significance. In present-day, Chico is a City of more than 100,000 people and is the most populous city in Butte County.

Records Searches and Pedestrian Survey to Identify Existing Cultural Resources

Northwest Information Center

On September 7, 2022, a records search for the project site and a 0.5-mile radius beyond the project site's boundary was conducted at the Northeast Information Center (NEIC) located at California State University in Chico, California. The current inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historical Landmarks (CHL) list, the California Points of Historical Interest (CPHI) list, and the California Built Environment Resource

Directory (BERD) for Butte County were also reviewed to determine the existence of previously documented local historical resources.

The results of the records search indicate that there are three recorded historical cultural resources within the project site (Table 3.5-1). This includes the Match Block Storage Building (P-04-004121), the Main Power House (P-04-004122), and the Engineering Building (P-04-004123). There are 37 historic resources within a 0.5-mile radius of the project site (Table 3.5-2). In addition, two survey reports (Table 3.5-3) are on file with the NEIC for the project site and an additional 17 reports for a 0.5-mile search radius beyond the project site (Table 3.5-4). The two reports within the project site are linear studies that surveyed the southern and eastern boundary of the project site. This indicates that the majority of the project site has not been previously surveyed for cultural resources.

Table 3.5-1: Recorded Cultural Resources Within the Project Site

Resource No.	Resource Description	Date Recorded
P-04-004121	Resource Name–Carpenter Shop; Other–Match Block Storage Building; OHP Property Number–049537; OHP PRN–5926-0165-0000	1983
P-04-004122	Resource Name–Apiary Department; Other–Main Power House; OHP Property Number–049536; OHP PRN–5926-0164-0000	1983
P-04-004123	Resource Name–Lumber Warehouse; Other–Engineering Department (Machine Shop); OHP Property Number–049535; OHP PRN–5926-0163-0000	1983
Source: Northeast Information Center (NEIC) Records Search. September 7, 2022.		

Table 3.5-2: Recorded Cultural Resources Within a 0.5-mile Radius of the Project Site

Resource No.	Resource Description	Date Recorded
P-04-000712	Resource Name–"The Junction"	1980
P-04-000713	Unnamed Resource	1980
P-04-003910	OHP Property Number–049381; Resource Name–Malloy House; OHP PRN–5926-0023-0000	1983
P-04-003956	Resource Name–Seventh Day Adventist Church; Other–Apostolic Gospel Temple; OHP Property Number–049443; OHP PRN–5926-0076-0000	1982
P-04-003957	Resource Name–Bill Betty House; OHP Property Number–049444; OHP PRN–5926-0077-0000	1983
P-04-003958	Resource Name–Andersen's Blacksmith Shop; OHP Property Number–49445; OHP PRN–5926-0078-0000	1982
P-04-003959	OHP Property Number–049446; OHP PRN–5926-0079-0000	1983
P-04-003960	OHP Property Number–049447; OHP PRN–5926-0080-0000	1983

Resource No.	Resource Description	Date Recorded
P-04-003982	Resource Name–South of Campus Neighborhood; Other–5926-239-9999 (1-165); OHP Property Number–73320; National Register–NPS-91000636-9999; OHP PRN–04-0004; OTIS Resource Number–474179	1988
P-04-004001	Resource Name–Chico Brewery Building; Other–Chico Brewery; OHP Property Number–049453; OHP PRN–5926-0086-0000	1981
P-04-004005	Resource Name–Mary Crouch Cottage; OHP Property Number–049457; OHP PRN–5926-0070-0000	1982
P-04-004006	Resource Name–Sacramento Valley Hospital; Other–"The Castle"; OHP Property Number–049458; OHP PRN–5926-0091-0000	1982
P-04-004010	Resource Name–Lobdell Building; Other–Lobdell Brothers Cleaners & Dyers; OHP Property Number–049487; OHP PRN–5926-0115-0000	1983
P-04-004017	Resource Name–Swearingen House; Other–"The Victorian"; OHP Property Number–049495; OHP PRN–5926-0123-0000	1983
P-04-004056	Resource Name–Reorganized Church of Jesus Christ of Latter Day Saints; OHP Property Number–049533; OHP PRN–5926-0161-0000	1983
P-04-004057	Resource Name–Old Redeemer Lutheran Church; Other–Redeemer Lutheran Church; OHP Property Number–049534; OHP PRN–5926-0162-0000	1983
P-04-004058	Resource Name–Clough Home; OHP Property Number–049538; OHP PRN–5926-0166-0000	1983
P-04-004059	Resource Name–Diamond Match Home; Other–J. E. Hibbert Home; OHP Property Number–049539; OHP Z-number–5926-0167-0000	1983
P-04-004060	Resource Name–Diamond Match House; Other–Finnel House; OHP Property Number–049540; OHP PRN–5926-0168-0000	1983
P-04-004061	Resource Name–Clark House; Other–Thomasson House; OHP Property Number–049541; OHP PRN–5926-0169-0000	1983
P-04-004062	Resource Name–E. D. Sharp Home; OHP Property Number–049542; OHP PRN–5926-0170-0000	1983
P-04-004063	Resource Name–Bruce Home; OHP Property Number–049543; OHP PRN-5926-0171-0000	1983
P-04-004073	Resource Name–W. W. Head House; OHP Property Number–049600; OHP PRN–5926-0183-0000	1984
P-04-004102	OHP Property Number–049631; OHP PRN–5926-0214-0000	1984
P-04-004103	Resource Name–Armbruster House; OHP Property Number–049632; OHP PRN–5926-0215-0000	1984
P-04-004105	Resource Name–L. N. Lewis House; OHP Property Number–049635; OHP PRN–5926-0218-0000	1984
P-04-004106	Resource Name–S. H. Chalmers House; OHP Property Number–049636; OHP PRN–5926-0219-0000	1984

Resource No.	Resource Description	Date Recorded
P-04-004107	Resource Name–Cook Home; Other–Perley Home; OHP Property Number–049637; OHP PRN–5926-0220-0000	1984
P-04-004108	Resource Name–W. R. Honodel House; Other–Tau Gamma Theta; OHP Property Number–049638; OHP PRN–5926-0221-0000	1984
P-04-004109	Resource Name–Welschke House; OHP Property Number–049639; OHP PRN–5926-0222-0000	1984
P-04-004113	Resource Name–Keyawa Home; OHP Property Number–049643; OHP PRN–5926-0226-0000	1984
P-04-004114	Resource Name–Rock House; Other–Leo Palmiter House; OHP Property Number–049644; OHP PRN–DOE-04-98-0001-0000; OHP PRN HUD971120C; OHP PRN–5926-0227-0000; OHP PRN–HUD890420A	1984
P-04-004115	Resource Name–Arthur Lammers House; OHP Property Number–049645; OHP PRN–5926-0228-0000	1984
P-04-004116	Resource Name–J. Culver House; OHP Property Number–049646; OHP PRN–5926-0229-0000	1984
P-04-004117	Resource Name–J. H. Ballew House; OHP Property Number–049647; OHP PRN–5926-0230-0000	1984
P-04-004118	Resource Name–Albert F. Jones House; OHP Property Number–049648; OHP PRN–5926-0231-0000	1984
P-04-004468	Other–UPRR Valley Subdivision Milepost (MP) 182.72 Railroad Bridge	2019
Source: Northeast Information Center (NEIC) Records Search. September 7, 2022.		

Table 3.5-3: Previous Investigations Within the Project Site

Report No.	Report Title/Project Focus	Author	Date
NEIC-004658	Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project: Segment WPO4: Sacramento to Redding	Nelson, Wendy J., Maureen Carpenter, and Kimberley L. Holanda	2000
NEIC-007362	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Arrington, Cindy and Bryon Bass	2006
Source: Northeast Information Center (NEIC) Records Search. September 7, 2022.			

Table 3.5-4: Previous Investigations Within a 0.5-mile Radius of the Project Site

Report No.	Report Title/Project Focus	Author	Date
NEIC-000144	Summary Report: Environmental Impact Analysis for the Proposed Development of a Little Chico Creek Green Belt, Chico, California	Dorthy Cross and Richard Thorn	1975

Report No.	Report Title/Project Focus	Author	Date
NEIC-000190	Archaeological Reconnaissance of the Dayton Road Realignment Project No. 44191- 75-1, Chico, California	Keith Johnson	1980
NEIC-000827	Technical Report: Cultural Resources Survey for the US Sprint Fiber Optic Cable Project–Oroville, California to Eugene, Oregon	Minor, Rick, Jackson Underwood, Rebecca Apple, Stephen Dow Beckham, and Clyde Woods	1987
NEIC-003185	Archaeological Inventory Survey of the Otterson Drive Extension Project, Evaluation of Two Alternative Alignments. City of Chico, Butte County, California	Peter M. Jensen	1999
NEIC-004658	Cultural Resources Survey for the Level (3) Communications Long Haul Fiber Optics Project: Segment WPO4: Sacramento to Redding	Nelson, Wendy J., Maureen Carpenter, and Kimberley L. Holanda	2000
NEIC-007231	Archaeological Field Reconnaissance of the Myers Street Assessment District, Butte County, California	Gregory Henton	1978
NEIC-007283	Archaeological Inventory Survey for the Mulberry Street Development Involving APN 005-465-013, City Lot on the East Side of Mulberry Street, City of Chico, Butte County, California	Peter M. Jensen	2006
NEIC-007318	Archaeological Survey for the Juscor Investment, Inc. property (AP #63-20-01)	Richard Markley	1977
NEIC-007362	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Arrington, Cindy and Bryon Bass	2006
NEIC-007491	Archaeological Survey Report for the Chico Urban Area Nitrate Compliance Plan Environmental Impact Report Project, Chico, California	Westwood, Lisa and Russell Bevill	2000
NEIC-007937	An Archaeological Evaluation of the Guillen-Hagen Land Project, Chico, Butte County California	Lori Harrington	2007
NEIC-008152	Archaeological Inventory Survey for Hegan Business Park, AP #39-06-115, 36.5 Acres, Hegan Lane Near Comanche Creek, Southwest Chico, Butte County, California	Peter M. Jensen	1994
NEIC-008153	Archaeological Inventory Survey of the City of Chico's Proposed Storm Drain Trunk Line Project, Locust Street to Outfall at Little Chico Creek, Chico, Butte County, California	Peter M. Jensen	1994
NEIC-010724	Field Office Report of Cultural Resources Ground Survey Findings for the Brush Management	Rachael Morgan	2009

Report No.	Report Title/Project Focus	Author	Date
NEIC-011444	Archaeological Inventory Survey: Proposed BCAG Transit Project, c. 13-acres, City of Chico, Butte County, California	Sean Jensen	2011
NEIC-014191	Cultural Resources Survey Report for NRCS Project #16FY04-0002: Proposed Kohnke Sprinkler Irrigation Project, Butte County, California	Robert McCann	2016
NEIC-014657	Cultural Resources Survey Report for NRCS Project #16FY04-0002: Proposed Kohnke Sprinkler Irrigation Project, Butte County, California	Robert McCann	2016
Source: Northeast Information Center (NEIC) Records Search. September 7, 2022.			

Native American Heritage Commission Record Search

On September 1, 2022, FCS sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project site. A response was received on October 31, 2022, indicating that the Sacred Lands File search produced a negative result for Native American cultural resources in the project site. The NAHC included a list of 10 Tribal representatives available for consultation. To ensure that all Native American knowledge and concerns over potential TCRs that may be affected by implementation of the proposed project are addressed, FCS sent letters to all 10 tribal representatives on April 17, 2023. A response was received from the KonKow Valley Band of Maidu on April 18, 2023, deferring to the Mechoopda Indian Tribe for additional information. No additional responses have been received to date.

Cultural Resources Pedestrian Survey

On December 16, 2022, FCS Senior Archaeologist Dana DePietro, PhD, RPA, and FCS Archaeologist and Historian Ti Ngo conducted a pedestrian survey for unrecorded cultural resources in the project site. The survey began in the southeast corner of the project site and moved north and west, using north–south transects spaced at 10-meter intervals. All areas of the project site (the Barber Yard Specific Plan [BYSP] Area and the approximately 16-acre off-site improvement area) were closely inspected for culturally modified soils or other indicators of potential historic or prehistoric resources. Large palm trees line the former factory entrance road (an extension of 16th Street), and a small orchard of large palm trees is located near the end of the 16th Street extension, south of which is an area historically used as a baseball field. Significant areas of former orchards are evident on-site, located north, west, and south of the Warehouse, along the BYSP Area's eastern border south of West 16th Street, and in the southern corner of the BYSP Area, bounded by Estes Road and the decommissioned Union Pacific Railroad (UPRR) spur. Landscaping and orchards have not been maintained for at least two decades, and many on-site trees have died due to prolonged neglect and lack of water. Weedy vegetation, aged orchards, and various trees persist throughout the project site. As a result, visibility of native soils was less than an average of 7 percent across the project site, including the off-site improvement area. A large portion of the soils in the central portion of the project site were highly disturbed due to the Diamond Match Company Factory's operations from 1903 to 1975. The sections where native soils were visible were closely inspected using a hand

trowel. Visible soils were largely composed of medium brown (7.5YR 3/4) dark brown alluvial clay soil, interspersed with chalk, basalt, schist, and river stones ranging from 3 to 5 centimeters.

Survey conditions were documented using digital photographs and field notes. During the survey, Dr. DePietro and Mr. Ngo examined all areas of the exposed ground surface for prehistoric artifacts (e.g., fire-affected rock, milling tools, flaked stone tools, toolmaking debris, ceramics), soil discoloration and depressions that might indicate the presence of a cultural midden, faunal and human osteological remains, and features indicative of the former presence of structures or buildings (e.g., postholes, standing exterior walls, foundations) or historic debris (e.g., glass, metal, ceramics). No indications of prehistoric archaeological resources were found over the course of the pedestrian survey.

During the course of the survey, Dr. DePietro and Mr. Ngo encountered two previously recorded resources on the project site. These consisted of the approximately 17,200-square-foot Engineering Building (P-04-004123) (Engineering Building) and the Match Block Storage Building (P-04-004121) (the Shop). The Engineering Building consists of a large, brick, shell structure that was used during the Diamond Match Factory era. The shop consists of an approximately 2,800-square-foot, brick construction building also used during the Diamond Match Factory era. A previously recorded resource, the Main Power House also known as the "Apiary" (P-04-004122) was destroyed in a fire in 2004 and only the exposed foundation and a single brick wall of that original structure remained. Three additional structures were found during the course of the survey. This consisted of a large, approximately 130,000-square-foot warehouse (Warehouse) in the northeastern portion of the project site, along with the related guard house and guard booth on the central northern boundary of the project site, and a storage shed in the central portion of the project site adjacent to Engineering Building. Dr. DePietro and Mr. Ngo recommended that these existing structures be evaluated for their eligibility as a historic resource under the NRHP, CRHR, and local listings. During the course of the survey, remnants of foundations and pipes from the previous structures were observed in the central portion of the project site, however no surface indications of trash piles or subsurface archaeological elements that may have recoverable data potential were observed.

As noted above, Dr. DePietro and Mr. Ngo also surveyed the triangular-shaped parcel south of the Barber Yard complex referred to as the off-site improvement area. This portion of the project site is bounded by UPRR tracks to the southwest, Estes Road in the north, and residential housing in the east. The survey team encountered isolates of a nail and two metal hooks adjacent to the UPRR along the southwest corner of this portion of the project site. No other archaeological or historical resources were found in the course of the pedestrian survey. Pedestrian survey photographs can be found in confidential Appendix C.

Buried Site Potential

The potential for yet identified cultural resources in the project site and vicinity was reviewed against relevant geologic and topographic geographic information system data for the general area and information from other nearby projects. The project site vicinity was previously evaluated against a set of criteria identified in a geoarchaeological overview that was prepared for the California Department of Transportation (Caltrans) District 3. This study mapped the "archaeological sensitivity," or potential to support the presence of buried prehistoric archaeological deposits in the

Central Valley, based on relevant geology and environmental parameters including distance to water and landform slope. This study concluded that sites consisting of flat, Holocene-era deposits in close proximity to water resources had a moderate to high probability of containing subsurface archaeological deposits when compared to earlier Pleistocene deposits situated on slopes or further away from drainages, lakes, and rivers. The study, conducted by Jack Meyer and Jeffrey Rosenthal, concluded that the City of Chico, in general, has a high potential for encountering prehistoric archaeological resources during subsurface construction.

According to the United States Geological Survey (USGS) survey of Butte County conducted in 1992 by G.J. Suacedo and D.L. Wagner, the project site is situated upon the Pleistocene Modesto formation, which abuts Holocene soils in the northeastern and southwestern portion of the project site. All Holocene-era deposits have the potential to contain archaeological deposits, which increases with the ease of the slope and proximity to water resources. Comanche Creek runs to the south of the project site while Little Chico Creek is to the north of the project site. The NEIC record search results, NAHC Sacred Lands File record search results, and nearby water resources nearby indicate that there is a moderate probability of encountering prehistoric archaeological resources during subsurface construction on-site. Furthermore, given the history of industrial use within the project site for the Diamond Match Company, there is moderate to high potential for unanticipated buried historical cultural resources to be impacted and encountered during project construction. While the previous demolition and destruction of buildings associated with the Diamond Match Company Factory has undermined the project site as a historic district, there is a possibility of encountering unknown elements of the district during subsurface construction.

Architectural and Historic Resources Assessment

The following is a summary of a built environmental assessment of the existing six structures in the project site that was conducted by South Environmental to determine their historical significance and potential inclusion into the CRHR, and NRHP, and local listings. A Built Environment Assessment Report along with DPR Series 523 forms can be found in Appendix C.

The Warehouse, guard house, and guard booth were constructed by the Louisiana-Pacific Corporation after its purchase of the BYSP Area from the original owner, the Diamond Match Factory Company. The storage shed was constructed in 1998 after ownership of the BYSP Area was transferred from the Louisiana-Pacific Corporation to Jeff Greening. These structures are utilitarian in design (e.g., the guard house and storage facility) and less than 45 years in age and do not appear to qualify for the CRHR or NRHP.

The Main Power House (the Apiary, since destroyed by fire), Engineering Building, and the Match Block Storage Building were previously evaluated in 1983 and given a status code of 3D, indicating their eligibility as a contributor to a historic district. Several other buildings associated with the Diamond Match Company complex were still extant at that time. These included: the Engineering Building, Match Block Storage Building, Main Power House (the Apiary), Blacksmith Shop, Lumber Warehouse 1, Lumber Warehouse 2, Main Office, Retail Lumber Shed, Box Factory and Planing Mill, Steam Dry Kilns, Warehouse No. 4, Planing Mill No. 2, Cut Up Shop, Sorting Shed, Blacksmith Shop, Apiary Storage, and Block and Shook Shop. These buildings remained on-site until 1984 when many of them were demolished except for the Engineering Building, Lumber Warehouses 1 and 2, the

Planing Mill and Box Factory, the Steam Dry Kilns, the Foundry, the Retail Lumber Shed, the Block and Shook Shop, the Block Storage building, Warehouse No. 4, the Crane Shed, the newer Planing Mill, the Cut-Up Shop, the Sorting Shed, and two Lumber Storage Sheds. The Main Power House, itself, was destroyed by arson in 2004 with only one small segment of its southern wall remaining. By 2020, the only structures associated with the Diamond Match Company are the Engineering Building, Match Block Storage Building, and remnant of the Main Power House. Because of the previous demolition/destruction of many of these structures associated with the Diamond Match Company, the "district has been materially impaired and lacks requisite integrity to convey significance as a historic district." The destruction of the Main Power House by fire and its remains' lack of historical integrity and feeling makes it ineligible to qualify as a historic resource under the CRHR, NRHP, or local listings. The two remaining buildings, the Engineering Building and Match Block Storage Building, are no longer constitutive of nor convey a historic district. Given the extent of demolition/destruction over time and the lack of original structures in the project site (except for the few referenced above), the project site no longer has the physical integrity to convey significance as a historic district.

As a result, the historic significance of the Engineering Building and Match Block Storage Building was evaluated on DPR Series forms based on their individual eligibility for the NRHP, CRHR, and local listings). Both structures were evaluated relative to the four eligibility criteria under NRHP and CRHR. This included an evaluation of the buildings' potential significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and are either:

A. Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).

B. Associated with the lives of persons important to local, California, or national history (Criterion 2).

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values (Criterion 3).

D. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

Engineering Building

Situated in the center of the BYSP Area the Engineering Building is a 3-story building situated upon a concrete slab foundation. Constructed in 1903, it consists of a two-level gable roof with parapet walls on the west and east elevations. The gabled portions of the roof are clad in corrugated metal. A former Diamond Match Company logo can still be faintly seen in the pediment in the area with a lighter shade of brick. All window openings, entryways, and doorways have a decorative arched brick lintel that emphasizes the curved design.

The main (west) elevation contains eight bays, with a 1.5-story central arched opening. This opening previously provided the entrance for rail cars and other equipment on rail tracks. The first level

contains six tall arched window openings with rectangular window frames. The second level contains eight windows that are shorter in size, with the middle two windows placed slightly higher on the elevation to accommodate the large central opening below. The centermost four windows on the second level are the only remaining window openings with partial sashes still in place, the rest having been removed. Four brick piers extend above the parapet wall and visually divide the first and last three bays of the elevation.

The north and south elevations are nearly identical, with 20 bays on the first and second levels, and a third level of clerestory windows. The first and second level windows match that of the main elevation (west), with the first level being taller than the second. At the tenth bay, there is a small arched opening with squared-off wood framing for a door. No window sashes or doors remain on the first two levels of both elevations. Nearly all of the eight-pane wood clerestory windows on the north elevation are present. Many of the clerestory windows on the south elevation are in poor condition or missing.

Criterion 1/A: Constructed in 1903, the Engineering Building was the first building constructed of the Diamond Match Factory's Chico Plant. As one of the oldest match corporations in the U.S, the Diamond Match Factory was involved not only in match production but in the lumber industry as well, which provided the raw materials for matches. The Engineering Building was used to create tools and provide space necessary to manufacture materials and machinery for the construction of new buildings on-site. In addition, the building was used to make repairs to the railroad and railroad components that transported lumber there. The building was an essential early component to the project site and the Company in its early years as it is what essentially allowed the plant to continue to grow. While many of the buildings associated with the Diamond Match Company have been demolished or destroyed over time by fire, the Engineering Building remains intact and is the oldest extant building from the original factory complex. It is also one of only two remaining buildings at the former factory site and therefore represents one of the last extant buildings associated with the Diamond Match Company Factory, which played an important role in the development of Chico and reflects important associations with what was the largest manufacturer of matches in the United States at the turn of twentieth century. Therefore, it appears to be eligible under NRHP Criterion A or CRHR Criterion 1.

Criterion 2/B: The Engineering Building is associated with the Diamond Match Company, America's oldest and most successful match manufacturers and millwork producers. The Diamond Match Company had many prominent, influential, and successful people who played an important role in the overall success of the national Company but they did not have a direct association with the aforementioned building at the Chico location. The Diamond Match Company plant in Chico represents the collective efforts of many individuals, rather than the work of any single individual, and no single individual was found to be directly connected to the Engineering Building itself. Therefore, it is not eligible under NRHP Criterion B or CRHR Criterion 2.

Criterion 3/C: The subject property is an early twentieth century 3-story brick building that was constructed for utilitarian use. This building represents a common, industrial architectural type found throughout California and the nation in the early 1900s. However, in Chico, the Diamond Match Company plant was the largest industry in the City. The Engineering Building remains one of

the only extant examples of this type of construction from this time period in Chico. Archival research failed to identify any other comparable examples of brick industrial buildings from a similar time period in Chico. Therefore, this building style and type is markedly one of the best and only remaining examples of Chico's early twentieth century industrial architecture. Therefore, it appears eligible under NRHP Criterion 3 or CRHR Criterion C.

Criterion 4/D: The Engineering Building's interior is no longer extant nor is there any equipment remaining in the structure. The original materials for its doors and windows are entirely missing. While the exterior of the building retains its integrity of design, it does not appear to yield important information about historic construction methods, materials, or technologies. Therefore, it is not eligible under NRHP Criterion 3 or CRHR Criterion D.

Match Block Storage Building

Constructed in 1916, the Match Block Storage Building is a tall, narrow brick building with a concrete foundation. Originally used as a storage building for match blocks for "strike anywhere" matches, the building was eventually converted to a carpenter shop and storage building. The building reflects Classical Revival Style elements with a strong front gable roof form, prominent pediment with a raked cornice, and engaged brick pilasters that appear similar to repetitive columns. The gable roof is clad in corrugated metal. The main (west) elevation features a large circular opening in the pediment, and a large, square, wood-framed entrance opening at the ground level. The north and south elevations mirror each other with five bays interspersed with brick pilasters. The fifth bay on the north elevation and the first bay on the south elevation contain a wood frame door opening. The south elevation still has a door frame in its opening, but the north door is missing. The remaining four bays on both elevations contain arched window openings with decorative arched brick lintels and concrete covered brick sills. None of the window openings retain their window sashes. Between bays 1 and 2 and 4 and 5 on both elevations are metal downspouts. On the south elevation, between bays 3 and 4, is a metal ladder that provides roof access. Modifications to the building include the insertion of a rectangular door on the rear elevation (date unknown) and the removal of windows from the front façade (date unknown). Despite these changes, the building is largely intact and retains its original form and appearance. The building is currently vacant, and all elevations are heavily graffitied.

Criterion 1/A: The Match Block Storage Building was constructed in 1916 as a part of the Chico Diamond Match Company Factory's expansion. The Diamond Match Company is America's oldest match manufacturer and dominated the industry in the late nineteenth and early twentieth centuries. The Company was monumental not only in its match production, but in the lumber industry as well. The Diamond Match Company operated in Chico from 1903 until 1975 and had a profound influence on the town by bringing industries that provided jobs, established a residential neighborhood for workers, and created a social atmosphere that all surrounded the plant and the Company.

The Match Block Storage Building was used as a storage warehouse for the wooden blocks for striking matches. As the match factory increased its productivity and output, the need for more storage buildings was necessary. When "strike anywhere matches" ceased to be produced due to

safety concerns, the building was converted to general storage and later used as a carpenter shop and storage for the California Millwork Department.

While most buildings on the Diamond Match Company location have been demolished over time, the Match Block Storage Building remains intact and is one of only two remaining buildings at the former factory site and therefore represents one of the last extant buildings associated with the Diamond Match Company Factory, which played an important role in the development of Chico and reflects important associations with what was the largest manufacturer of matches in the United States at the turn of twentieth century. Therefore, the Match Block Storage Building appears to be eligible under NRHP Criterion A or CRHR Criterion 1.

Criterion 2/B: The Match Block Storage Building is associated with the Diamond Match Company, America's oldest and most successful match manufacturers and millwork producers. The Diamond Match Company had many prominent, influential, and successful people who played an important role in the overall success of the national Company but did not have a direct association with the Chico location. The Diamond Match Company Factory in Chico represents the collective efforts of many individuals, rather than the work of any single individual, and no single individual was found to be directly connected to the Match Block Storage Building itself. Therefore, the Match Block Storage Building is not eligible under NRHP Criterion B or CRHR Criterion 2.

Criterion 3/C: The Match Block Storage Building was constructed circa 1916 as a brick industrial building at the Diamond Match Company Factory location in Chico. Its main characteristics include large massing, a bay system with rows of windows and doors, and minimal ornamentation. The building reflects a Classical Revival Style elements with a strong front gable roof form, prominent pediment with a raked cornice, and engaged brick pilasters that appear similarly to repetitive columns. The building was constructed for utilitarian purposes as a part of a larger industrial complex and is distinctive as an early twentieth century brick industrial building.

This building represents a common industrial architectural type found throughout California and the nation in the early 1900s. However, in Chico, the Diamond Match Company plant was the largest industry in the City. The Match Block Storage Building remains one of the only extant examples of this type of construction from this time period in Chico, with the added uniqueness of its Classical Revival Style elements. Archival research failed to identify any comparable examples of brick industrial buildings from a similar time period in Chico. Therefore, this building style and type is markedly one of the best and only remaining examples of Chico's early twentieth century industrial architecture. Therefore, it is eligible under NRHP Criterion 3or CRHR Criterion C.

Criterion 4/D: The Match Block Storage Building's interior is no longer extant nor is there any equipment remaining in the structure. While the exterior of the building retains its integrity of design regarding its overall form, brick cladding, fenestration, and bay system organization, it lacks certain elements of its design including windows and doors. As a result, it does not appear to yield important information about historic construction methods, materials, or technologies. Therefore, it is not eligible under NRHP Criterion 3 or CRHR Criterion D.

In summary, both the Engineering Building and Match Block Storage Building appear to qualify under Criteria 1/A and 3/C under the CRHR and NRHP as well as for local listings. DPR forms were prepared for both structures and can be found in confidential Appendix F to the CRA: Department of Parks and Recreation Forms.

Summary of Known Existing Cultural Resources at the Project Site

Historic Architectural Resources

As described above, both the Engineering Building and Match Block Storage Building appear to qualify under Criteria 1/A and 3/3 under the CRHR and NRHP as well as for local listings.

Archaeological Resources

There are no recorded prehistoric archaeological resources within the project site. No other archaeological resources were found during the pedestrian survey and the Sacred Lands File (SLF) search conducted with the NAHC was negative.

3.5.6 - Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the NRHP, which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 Code of Federal Regulations 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) amended the Antiquities Act of 1906 (16 United States Code [USC] 431–433) and set a broad policy that archaeological resources are important to the nation and should be protected and required special permits before the excavation or removal of archaeological resources from public or Indian lands. The purpose of ARPA was to secure, for the present and future benefit of the American people, the protection of archaeological resources and

sites that are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data that were obtained before October 31, 1979.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA) established federal policy to protect and preserve the inherent rights of freedom for Native groups to believe, express, and exercise their traditional religions. These rights include, without limitation, access to sites, use and possession of sacred objects, and freedom to worship through ceremonials and traditional rites.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets forth provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and Tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American Tribe claiming affiliation.

State

California Register of Historical Resources/CEQA Guidelines Section 15064.5(a)

As defined by Section 15064.5(a)(3)(A-D) of the California Environmental Quality Act (CEQA) Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the CRHR. The CRHR and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or State level.

CEQA Guidelines Section 15064.5(a), in Title 14 of the California Code of Regulations, defines a "historical resource" as:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources.
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources.
4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

Therefore, under CEQA, even if a resource is not included on any local, State, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that a resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. Archaeological and historical sites are protected pursuant to a wide variety of State policies and regulations, as enumerated in the Public Resources Code (PRC). Cultural resources are recognized as nonrenewable resources and receive additional protection under the PRC and CEQA.

California Public Resources Code Section 5024.1–California Register of Historic Resources

Section 5024.1 of the Public Resources Code states that the CRHR is a guide to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected from substantial adverse change. Administration of the CRHR is to be overseen by the NAHC. Section 5024.1 indicates that the register shall include historical resources determined by the NAHC, according to adopted procedures, to be significant and to meet the criteria in subdivision (c).

CEQA Guidelines 15064.5(c)—Effects on Archaeological Resources

As noted above, the CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA Guidelines direct lead agencies to evaluate archaeological sites to determine whether they meet the criteria for listing in the CRHR. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the CRHR, potential adverse impacts to it must be considered. If an archaeological site is considered not to be a historical resource but meets the definition of a "unique archaeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

CEQA Guidelines Section 15064.5(d)—Effects on Human Remains

Native American human remains and associated burial items may be significant to descendant communities and/or may be scientifically important for their informational value. They may be significant to descendant communities for patrimonial, cultural, lineage, and religious reasons. Human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendant groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines § 15064.5(d); PRC § 5097.98). CEQA and other State laws and regulations regarding Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects on human remains within the contexts of their value to both descendant communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would affect Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the NAHC to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines § 15064.5(d); PRC § 5097.98).
- If human remains are accidentally discovered, the County Coroner must be contacted. If the County Coroner determines that the human remains are Native American, the Coroner must contact the NAHC within 24 hours. The NAHC must identify the Most Likely Descendant (MLD) to provide the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items.
- If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (PRC § 5097.98).
- If potentially affected human remains or a burial site may have scientific significance, whether or not it has significance to Native Americans or other descendant communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines § 15064.5(c)(2)).

California Public Resources Code Section 5097.91—Native American Heritage Commission

Section 5097.91 of the Public Resources Code established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under Section 5097.91 of the Public Resources Code, a State policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. Section 5097.98 of the Public Resources Code specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a County Coroner. Section 5097.5 defines as a misdemeanor the unauthorized

disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

California Senate Bill 18—Protection of Tribal Cultural Places

SB 18 (Gov. Code § 65352.3) incorporates the protection of California traditional Tribal cultural places into land use planning for cities, counties, and other public agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American Tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 requires public notice to be sent to Tribes listed on the NAHC SB 18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the Tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code that may be affected by the proposed adoption or amendment to a general or specific plan.

California Assembly Bill 52/ Public Resources Code Section 21074—Effects on Tribal Cultural Resources

AB 52 was signed into law on September 25, 2014, and provides that any public or private "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." As described more fully below, Tribal Cultural Resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." Under prior law, Tribal Cultural Resources were typically addressed under the umbrella of "cultural resources," as discussed above. AB 52 formally added the category of "tribal cultural resources" to CEQA and extends the consultation and confidentiality requirements to all projects, rather than just projects subject to SB 18 (discussed above). The parties must consult in good faith, and consultation is deemed concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect on a Tribal Cultural Resource (if such a significant effect exists); or (2) when a party concludes that mutual agreement cannot be reached. Feasible mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. AB 52 also identifies mitigation measures that may be considered to avoid significant impacts if there is no agreement on appropriate mitigation. Recommended measures include:

- Preservation in place
- Protecting the cultural character and integrity of the resource
- Protecting the traditional use of the resource
- Protecting the confidentiality of the resource
- Permanent conservation easements with culturally appropriate management criteria

Public Resource Code Section 21074 defines "tribal cultural resources" as follows:

a) "Tribal cultural resources" are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the CRHR. (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.
   (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
   (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Health and Safety Code Section 7050.5 (Treatment of Human Remains)

Section 7050.5 of the California Health and Safety Code sets forth provisions related to the treatment of human remains. As the Code states, "every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor" (Health and Safety Code § 7050.5) except under circumstances as provided in Section 5097.99 of the Public Resources Code. The statute also provide guidelines for the treatment of human remains found in locations other than a dedicated cemetery, including responsibilities of the Coroner.

Public Resources Code Section 5097.98 (Discovery of Human Remains)

Section 5097.98 provides protocols for the discovery of human remains. It states that "when the commission receives notification of a discovery of Native American human remains from a County Coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify persons believed to be most likely descended from the deceased Native American" (PRC § 5097.98). It also sets forth provisions for descendants' preferences for treatment of the human remains and what should be done if the commission is unable to identify a descendant.

Local

City of Chico General Plan

Policy CRHP-2.1 **(Infill and Historic Preservation)**–Integrate the values of historic preservation with infill development and adaptive reuse.

Action CRHP-2.1.2 **(Guidelines for Redevelopment of Historic Resources)**–Utilize the City's Design Guidelines Manual for discretionary design review to address exterior alterations proposed to historic buildings in accordance with the Historic Preservation Ordinance

Policy CRHP-2.2 **(Adaptive Reuse**)–Encourage the adaptive reuse of historic buildings when the original use of the structure is no longer feasible.

Action CRHP-2.2.1 **(Exterior of Historic Structures)**–With discretionary actions or in compliance with the Historic Preservation Ordinance, restore or preserve the original exterior of historic structures at the time of a change in use, whenever feasible.

Policy CRHP-2.3 **(Demolition as Last Resort)**–Limit the demolition of historic resources to an act of last resort, to be permitted only if rehabilitation of the resource is not feasible; demolition is necessary to protect the health, safety, and welfare of its residents; or the public benefits outweigh the loss of the historic resource.

Policy CRHP-2.5 **(Purchase of Historically Significant Buildings)**–Explore grant funding, partnerships, and other opportunities to purchase historically significant buildings or sites that are eligible for State or National Registers as they become available.

Action CRHP-2.5.1 **(Register Listings of City-owned Properties)**–Pursue the listing of City-owned historic properties on the National Register of Historic Places and California Register of Historical Resources.

3.5.7 - Methodology

This evaluation focuses on whether implementation of the proposed project would significantly impact historic, architectural, archaeological resources, human remains, or TCRs.

As described more fully below in the applicable significance thresholds to be utilized in this analysis, the proposed project may have a significant impact on a historical resource if construction/operation of the proposed project would impair a resource's eligibility for inclusion in the CRHR. Analysis is based, in part, on information collected from record searches at the NEIC, additional archival research, pedestrian surveys, and a Historic Built Environment Survey Report. If an identified impact would leave a significant cultural resource no longer able to convey its significance, meaning that the resource would no longer be eligible for listing in the CRHR, then the proposed project's impact would be considered a significant adverse change. However, according to CEQA Guidelines Section 15126.4(b)(1), if a project adheres to the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, then the project's impact "shall generally be considered mitigated below a level of significance and thus is not significant."

Both direct and indirect effects of project implementation were considered for this analysis. Direct impacts are typically associated with construction and/or ground-disturbing activities, and have the potential to immediately alter, diminish, or destroy all or part of the character and quality of archaeological resources and/or historic architecture, human remains, or eligible TCRs. Indirect impacts are typically associated with post-project implementation conditions that have the potential to alter or diminish the historical setting of a cultural resource (generally historic architecture) by introducing visual intrusions on existing historical structures that are considered undesirable.

3.5.8 - Thresholds of Significance

The City, as the lead agency, in its discretion has decided to utilize the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to cultural resources and TCRs resulting from the implementation of the proposed project would occur. Specifically, impacts would be considered significant if the proposed project would:

a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c) Disturb any human remains, including those interred outside of formal cemeteries?

d) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

e) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

3.5.9 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Historic Resources

Impact CUL-1:	**The proposed project could cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.**

Impact Analysis

As described above, the California Historical Resources Information System (CHRIS) search identified three historic cultural resources within the project site, and 37 historic resources within a 0.5-mile radius of the project site. Furthermore, two survey reports within the project site are linear studies that surveyed the southern and eastern boundary of the project site. This indicates that the majority of the project site has not been previously surveyed for cultural resources. The Built Environmental Assessment (BEA) determined that the Engineering Building and Match Block Storage Building qualify under the CRHR and NRHP as well as for local listings. The pedestrian survey encountered six

structures on-site. Given this is the location of a former National Register eligible historic district, there is high likelihood of encountering historic materials associated with the project site during project construction. As such, the potential for the proposed project to have an adverse effect on historic or prehistoric cultural resources is moderate to high within the BYSP Area. There is a moderate potential for encountering unrecorded cultural resources in the off-site improvement area, which is distinct from the BYSP from a cultural resources standpoint because of the lack of existing and historic structures within the built environment.

In addition, Mitigation Measure (MM) CUL-1a requires that an Archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology and a qualified Architectural Historian or Historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards prepare a Historical and Archaeological Resources Treatment Plan prior to construction activities. This includes a pre-construction survey, a post-construction survey as well as a Worker Environmental Awareness Program (WEAP) training for construction personnel conducting ground disturbance at the BYSP Area or the off-site improvement area prior to the start of construction. Furthermore, it requires that a qualified archaeological monitor be present on-site during all ground disturbance occurring within (1) the footprints of prior structures or (2) undisturbed native soils, as well as procedures in the event of inadvertent discovery. In addition, MM CUL-1b requires that, in the event that adaptive reuse of the Engineering Building and/or the Match Block Storage Building is pursued as part of an individual specific development proposal, adaptive reuse design shall be developed by a qualified Architectural Historian/Historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards for architectural history/historic preservation. The City should review the feasibility of adaptive reuse in consideration of the proposed new use, seismic retrofit needs, and overall structural stability of the buildings. The findings should then inform the adaptive reuse design, as appropriate and feasible, which should be developed in coordination with the Architectural Historian/Historic Preservation Professional to ensure that all of the important character-defining features of the buildings are appropriately considered in the proposed design. With incorporation of these mitigation measures, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CUL-1a Prior to issuance of the first grading permit or site improvement plan (whichever comes first), the subject developer of the relevant specific individual development proposal shall hire an Archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology and a qualified Architectural Historian or historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards to prepare a Historical and Archaeological Resources Treatment Plan for the proposed project. The plan shall be subject to review and approval by City planning staff prior to approval of the subject grading permit or site improvements plans and shall include any and all feasible, protective measures required to ensure that character-defining elements of the Engineering

Building and/or the Match Block Storage Building (as applicable) are not inadvertently damaged or demolished during project construction. The plan shall also include provisions for a Worker Environmental Awareness Program (WEAP) archaeological resource sensitivity training for construction personnel conducting ground disturbance at the site or off-site improvements prior the start of construction and provisions for the identification, recordation, and disposition of any significant archaeological resources (both historic era and prehistoric) that may be encountered over the course of subsurface excavations at the project site.

MM CUL-1b At such time that adaptive reuse of the Engineering Building and/or the Match Block Storage Building is pursued as part of an individual specific development proposal, adaptive reuse design shall be developed by a qualified Architectural Historian/Historic Preservation Professional meeting the Secretary of the Interior's Professional Qualifications Standards for architectural history/historic preservation. The City shall include in its review the feasibility of adaptive reuse in consideration of the proposed new use, seismic retrofit needs, and overall structural stability of the buildings. These findings shall then inform the adaptive reuse design, as appropriate and feasible, which shall be developed by the Architectural Historian/Historic Preservation Professional in coordination with the subject developer and City to ensure that all of the important character-defining features of the buildings are appropriately considered in the proposed design.

The proposed design shall contain sufficient detail so the qualified Architectural Historian/Historic Preservation professional can determine whether the adaptive reuse is consistent with the Standards for Rehabilitation. The adaptive reuse of the Engineering Building and/or Match Block Storage Building shall include a reasonably detailed protection and maintenance plan that outlines a long-term strategy for maintaining and protecting these resources over time. The plan shall include a schedule for regular maintenance of the subject building(s) and vicinity, including clearing of any overgrown vegetation, regular monitoring, and surveillance, and shall also develop and incorporate a reasonable strategy for the long-term security of the building(s) and vicinity to prevent trespassing and vandalism of the buildings to the extent feasible.

If, after consultation with the above-referenced historic preservation professionals, it is determined that the subject building(s) cannot be adaptively reused in conformance with the Standards for Rehabilitation as currently designed and the subject developer therefore determines that adaptive reuse cannot feasibly proceed and instead determines to proceed with demolition of the subject building(s), the subject building(s) shall be subject to archival documentation that consists of photography of all exterior elevations, and views to and from the building(s), with detailed photographs of materials, doors, windows, rooflines, and other key components, and the preparation of an associated historical narrative documenting the subject building(s)' historical significance. Also, any original plans (if available) of the subject building(s) shall be scanned and reproduced so that they are available

for future study. The foregoing documentation shall be based on the National Park Service's Historic American Building Survey (HABS) guidelines for narrative and photographic documentation. A final set of the archival documentation and photographs shall be recorded and filed. In addition, should demolition occur, interpretive displays and salvage of historic materials shall be incorporated into the proposed project, as appropriate and feasible.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Archaeological Resources

Impact CUL-2: The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact Analysis

As detailed above, no prehistoric resources have been recorded at the NEIC. Furthermore, the NAHC Sacred Lands File search reported a negative result for Native American cultural resources in the project site. No prehistoric resources were encountered during the pedestrian survey. However, the potential for yet identified cultural resources in the project site and vicinity was reviewed against relevant geologic and topographic geographic information system data for the general vicinity and information from other nearby projects. As explained above, the project site was evaluated against a set of criteria identified by a geoarchaeological overview that was prepared for the California Department of Transportation (Caltrans) District 3. This study mapped the "archaeological sensitivity," or potential to support the presence of buried prehistoric archaeological deposits in the Central Valley, based on relevant geology and environmental parameters including distance to water and landform slope. This study concluded that sites consisting of flat, Holocene-era deposits in close proximity to water resources had a moderate to high probability of containing subsurface archaeological deposits when compared to earlier Pleistocene deposits situated on slopes or further away from drainages, lakes, and rivers. The study conducted by Jack Meyer and Jeffrey Rosenthal concluded that the City of Chico has a high potential for encountering prehistoric archaeological resources during subsurface construction.

Furthermore, according to the USGS Survey of the Butte County conducted in 1992 by G.J. Suacedo and D.L. Wagner, the project site is situated upon the Pleistocene Modesto formation, which abuts Holocene soils in the northeastern and southwestern portion of the project site. All Holocene-era deposits have the potential to contain archaeological deposits, which increases with the ease of the slope and proximity to water resources. Comanche Creek runs to the south of the project site while Little Chico Creek is to the north of the project site. This also indicates that the potential for the proposed project to have an adverse effect on prehistoric cultural resources is moderate to high. Furthermore, there is a moderate potential for encountering unrecorded cultural resources in the off-site improvement area. This creates a potentially significant impact. However, with implementation of MM CUL-1a and MM CUL-1b, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-1a and MM CUL-1b.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Human Remains

Impact CUL-3:	**The proposed project could disturb human remains, including those interred outside of formal cemeteries.**

Impact Analysis

As described above, the results of the records search indicate that there are three recorded historical cultural resources within the project site. There are 37 historic resources within a 0.5-mile radius of the project site. In addition, two survey reports on file with the NEIC for the project site and an additional 17 reports for a 0.5-mile search radius beyond the project site. The two reports within the project site are linear studies that surveyed the southern and eastern boundary of the project site. This indicates that the majority of the project site has not been previously surveyed for cultural resources.

Furthermore, the NAHC Sacred Lands File search produced a negative result. However, FCS contacted 10 tribal representatives to ensure that all Native American knowledge and concerns over potential TCRs are addressed. A response was received from the KonKow Valley Band of Maidu on April 18, 2023, deferring to the Mechoopda Indian Tribe for additional information. No additional responses have been received as of the writing of this Draft EIR.

As described above, the archaeological sensitivity of the BYSP Area for both historic and prehistoric cultural resources is moderate to high, and the potential for encountering unrecorded cultural resources in the off-site improvement area is moderate. While no formal cemeteries or areas containing human remains are known to be in the project site or vicinity, the possibility always exists that construction-related ground disturbance may uncover previously undiscovered human remains. In the unlikely event such a discovery is made, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 must be followed. These statutory requirements are included as MM CUL-3. With incorporation of MM CUL-3 as well as MM CUL-1a and MM CUL-1b, impacts in this regard would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-1a and MM CUL-1b.

MM CUL-3 Should a discovery of previously unknown buried human remains occur during ground-disturbing construction activities, Section 7070.5 of the California Health and Safety Code applies, and the procedures shall be followed by the subject developer in connection with the relevant specific individual development proposal. In the event of the accidental discovery or recognition of any Native American human remains (upon notification from a County Coroner pursuant to Health and Safety Code § 7050.5(c)), Public Resources Code Section 5097.98 shall be followed.

Relevant provisions of both Section 7050.5 of the Health and Safety Code (related to discovery of any human remains) as well as Section 5097.98 of the Public Resources Code (related to discovery of Native American remains) shall apply, as relevant.

Once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the human remains until the County Coroner is contacted and has made the required determinations pursuant to Health and Safety Code Section 7050.5(a) including whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American (or has reason to believe that they are those of a Native American), the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD (or his or her authorized representative) may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resource Code Section 5097.98, or
2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance:
    - The NAHC is unable to identify a most likely descendant or the most likely descendant failed to make a recommendation within 48 hours after being notified by the NAHC;
    - The MLD identified fails to make a recommendation; or
    - The landowner or its authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Listed or Eligible Tribal Cultural Resources

Impact CUL-4: **The proposed project could cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).**

As described above, the results of the records search indicate that there are three recorded historical cultural resources within the project site. There are 37 historic resources within a 0.5-mile radius of the project site. In addition, two survey reports on file with the NEIC for the project site and an additional 17 reports for a 0.5-mile search radius beyond the project site. The two reports within the project site are linear studies that surveyed the southern and eastern boundary of the project site. This indicates that the majority of the project site has not been previously surveyed for cultural resources.

Furthermore, the NAHC Sacred Lands File search produced a negative result. However, FCS contacted 10 Tribal representatives to ensure that all Native American knowledge and concerns over potential TCRs are addressed. A response was received from the KonKow Valley Band of Maidu on April 18, 2023, deferring to the Mechoopda Indian Tribe for additional information. No additional responses have been received to date. On June 6, 2023, the City sent the Mechoopda Indian Tribe a formal invitation to consult on the proposed project pursuant to AB 52. As of the writing of this Draft EIR, no response was received.

As described above, the archaeological sensitivity of the BYSP Area for prehistoric cultural resources is moderate to high, and the potential for encountering unrecorded cultural resources in the off-site improvement area is moderate, creating a potentially significant impact to TCRs as a result of inadvertent discovery during construction. However, with implementation of MM CUL-1a, MM CUL-1b, and MM CUL-3, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-1a, MM CUL-1b, and MM CUL-3.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

Lead Agency Determined Tribal Cultural Resources

Impact CUL-5: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

As described above, the results of the records search indicate that there are three recorded historical cultural resources within the project site. There are 37 historic resources within a 0.5-mile radius of the project site. In addition, two survey reports on file with the NEIC for the project site and an additional 17 reports for a 0.5-mile search radius beyond the project site. The two reports within the project site are linear studies that surveyed the southern and eastern boundary of the project site. This indicates that the majority of the project site has not been previously surveyed for cultural resources.

Furthermore, the NAHC Sacred Lands File search produced a negative result. However, FCS contacted 10 tribal representatives to ensure that all Native American knowledge and concerns over potential TCRs are addressed. A response was received from the KonKow Valley Band of Maidu on April 18, 2023, deferring to the Mechoopda Indian Tribe for additional information. No additional responses have been received to date. On June 6, 2023, the City sent the Mechoopda Indian Tribe a formal invitation to consult on the project pursuant to AB 52. As of the writing of this Draft EIR, no response was received.

As described above, the archaeological sensitivity of the BYSP Area for prehistoric cultural resources is moderate to high, and the potential for encountering unrecorded cultural resources in the off-site improvement area is moderate, creating a potentially significant impact to TCRs as a result of inadvertent discovery during construction. However, with implementation of MM CUL-1a, MM CUL-1b, and MM CUL-3, impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM CUL-1a, MM CUL-1b, and MM CUL-3.

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.5.10 - Cumulative Impacts

The geographic scope of the cumulative cultural resources analysis is fairly site-specific; here, it constitute the project site and within a 0.5-mile radius of the project site. This is because cultural resource and TCR impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils;

therefore, in addition to the project site (including the off-site improvement area), the area near the project site that would be the area most affected by project activities are the lands within a 500-foot radius. With respect to cumulative historic resource impacts specifically, these occur when the subject project and other cumulative projects, taken as a whole, affect historical resources in the immediate vicinity, contribute to changes within the same historic district, or substantially diminish the number of historical resources within the same context and theme as the historical resources within the study area.

Therefore, any significant cumulative impacts related to site-specific impacts to cultural resources and tribal cultural resources and would be mitigated, as necessary, on a project-by-project basis. For example, the proposed project, combined with other cumulative projects, would be required to comply with applicable policies, provisions, and programs in the BYSP, General Plan, and Municipal Code that protect cultural resources and TCRs. In addition, the proposed project, as well as other cumulative projects, would be required to comply with applicable federal, State, and local laws and regulations, including, among others, the provisions of SB 18 and AB 52, Section 15064.5 of the CEQA Guidelines, and Sections 5024.1 and 5097 of the Public Resources Code. Accordingly, given the previously developed, urbanized nature of the project site and vicinity, and because the proposed project, along with other cumulative development, would be required to comply with long-term planning documents and regulatory agency guidance establishing policies (including, but not limited to, evaluation requirements and inadvertent discovery procedures) and would also be required to mitigate any site-specific impacts, cumulative impacts to cultural resources and TCRs would be less than significant.

With respect to the proposed project's contribution to this already less than significant cumulative impact, the results of the cultural resources assessment and Tribal consultation, as detailed in this analysis, indicate that the proposed project would not have a direct or indirect significant impact on any historic resources, archaeological resources, human remains, or TCRs with implementation of project-level mitigation.

Additionally, cumulative impacts to historical resources must consider whether a project substantially diminishes the number of historical resources of the same property type. While many of the buildings associated with the Diamond Match Company have previously been demolished or destroyed over time by fire, the Engineering Building remains intact and is the oldest extant building from the original factory complex. It is one of two remaining buildings at the former factory site. There are opportunities to potentially adaptively reuse the Engineering Building and/or Match Block Storage Building, which, if such adaptive reuse occurs, would help to further reduce impacts in this regard. Therefore, there would be no potential for cumulative impacts to historic districts and the proposed project would not result in a reduction in the number of historic resources of the same property type.

Moreover, specific individual development proposal(s) that are pursued for the project site would be required to implement the mitigation measures set forth herein and adhere to all other applicable laws and regulations as well as applicable local plans, programs, and provisions in the General Plan, BYSP and Municipal Code governing cultural resources and TCRs. The foregoing would further ensure

that the proposed project would not make a cumulatively considerable contribution to this already less than significant impact.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Cumulative Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

3.6 - Energy

3.6.1 - Introduction

This section describes the existing energy setting in the project site and vicinity as well as the relevant regulatory framework. This section also evaluates the potential impacts related to energy that could result from implementation of the proposed project. The analysis in this section is based, in part, on project-specific energy calculation outputs and other supporting information included in Appendix C.

The following public comments were received during the Notice of Preparation (NOP) scoping period related to energy:

- Requests building electrification to reduce project energy impacts
- Incorporation of solar and use of reclaimed water into the proposed project

3.6.2 - Existing Setting

Following is information about the existing environmental setting as of March 24, 2023, the date the NOP for this Draft Environmental Impact Report (Draft EIR) was published. For additional information regarding the existing conditions related to energy, refer to Section 3.3, Air Quality; Section 3.4, Greenhouse Gas Emissions; and Section 3.11, Utilities and Service Systems of this Draft EIR.

Energy Basics

Energy use, especially through fossil fuel consumption and combustion, relates directly to environmental quality since it can have the potential to adversely affect air quality and generate greenhouse gas (GHG) emissions that may contribute to climate change. Energy is generally transmitted either in the form of electricity, measured in kilowatts (kW)[1] or megawatts (MW),[2] or natural gas, which is measured in British thermal units (BTU) or cubic feet.[3] Fuel, such as gasoline or diesel, is measured in gallons or liters. Electrical power is generated through a variety of sources, including fossil fuel combustion, hydropower, wind, solar, biofuels, and others. Natural gas is widely used to heat buildings, prepare food in restaurants and residences, and fuel vehicles, among other uses. Fuel use for transportation is related to the fuel efficiency of cars, trucks, and public transportation, choice of different travel modes such as automobile, carpool, and public transit, and miles traveled by these modes and is generally based on petroleum-based fuels such as diesel and gasoline. Electric vehicles (EVs) may not have any direct emissions but do have indirect emissions via the source of electricity generated to power the vehicle. Construction and routine operation and maintenance of infrastructure also consume energy.

[1] 1 kW = 1,000 watts; A watt is a derived unit of power that measure rate of energy conversion. 1 watt is equivalent to work being done at a rate of 1 joule of energy per second. In electrical terms, 1 watt is the power dissipated by a current of 1 ampere flowing across a resistance of 1 volt.

[2] 1 MW = 1 million watts

[3] A unit for quantity of heat that equals 100,000 British thermal units. A British thermal unit is the quantity of heat required to raise the temperature of 1 pound of liquid water 1 degree Fahrenheit at a constant pressure of 1 atmosphere.

Electricity

Electricity is used primarily for lighting, appliances, vehicle charging, and other uses. Trends over the past several decades have resulted in an increase in the use of electric power, especially for new homes. Electric power for new homes is often used to for electric space heating, electric water heating, electric cooking, and electric clothes drying.

Natural Gas

Natural gas is used primarily for heating, water heating, and cooking purposes and is typically associated with commercial and residential uses.

Fuel

Fuel is used primarily for powering off-road equipment, trucks, and passenger vehicles. The typical fuel types used are diesel and gasoline.

Electricity Generation, Distribution, and Use

State of California

Based on data and information available at the time of NOP release, the State of California generated approximately 203,257 gigawatt-hours (GWh) of electricity. Approximately 47.5 percent of the energy generation is sourced from natural gas, 32.3 percent from renewable sources (i.e., solar, wind, and geothermal), 7.2 percent from large hydroelectric sources, and the remaining 13.1 percent is sourced from coal, nuclear, oil, and other nonrenewable sources.[4] Additionally, California imported 83,962 GWh of electricity from other states.

Electricity and natural gas are distributed through the various electric load-serving entities (LSEs) in California. These entities include investor-owned utilities (IOUs), publicly owned LSEs, rural electric cooperatives, community choice aggregators, and electric service providers.[5]

Butte County and City of Chico

Butte County and the City of Chico receive electricity from Pacific Gas and Electric Company (PG&E). In November 2019, Butte County Board of Supervisors and the Chico City Council entered into a Joint Powers Authority agreement, creating Butte Choice Energy (BCE) Authority. The launch date of the program is still being assessed as of Spring 2024.[6] Specific information regarding BCE is currently unavailable; for purposes of a conservative analysis, it is not assumed BCE would become available as the proposed project's electricity provider. For the purpose of this analysis, PG&E data is discussed herein.

[4] California Energy Commission (CEC). 2022 Total System Electric Generation. Website: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation. Accessed December 12, 2024.
[5] California Energy Commission (CEC). 2019. Electric Load-Serving Entities (LSEs) in California Website: https://www.energy.ca.gov/almanac/electricity_data/utilities.html. Accessed December 12, 2024.
[6] Butte Choice Community Energy. About Us. Website: https://www.buttechoiceenergy.org/about-us. Accessed December 11, 2024.

PG&E provides electric services to 5.5 million customers, including 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines over a 70,000-square-mile service area that includes in Northern California and central California.[7]

PG&E receives electric power from a variety of sources. According to California Public Utilities Commission's (CPUC's) *2018 Renewable Portfolio Standard (RPS) Annual Report to the Legislature*, 47 percent of PG&E's power came from eligible renewable energy sources in 2020, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources.

In Butte County, PG&E reported an annual electrical consumption of approximately 1,444.74 million kWh in 2022, with 715.49 million kWh for nonresidential uses and 729.25 million kWh for residential uses.[8]

Project Site

Currently, uses consist primarily of abandoned structures and roadways in various states of disrepair that are associated with prior industrial uses, as well as existing recreational vehicle (RV) indoor storage. Electricity use on the project site is minimal and limited to the RV storage operation.

Natural Gas Generation, Distribution, and Use

State of California

Natural gas as an energy resource has several applications but is most commonly associated with cooking appliance use, electricity generation, and space and water heating. According to the CEC, in 2012 total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (BCF/year), up from 2,196 BCF/year in 2010.[9] Demand in all sectors except electric power generation remained relatively flat for the last decade due in large part to energy efficiency measures, but demand for power generation rose about 30 percent between 2011 and 2012. In 2019, it was estimated that California consumed 2,218.7 trillion BTU of natural gas. Natural gas-fired generation has become the dominant source of electricity in California, as it fuels about 43 percent of electricity consumption followed by hydroelectric power. Because natural gas is a resource that provides load when the availability of hydroelectric power generation and/or other sources decrease, use varies greatly from year to year. The availability of hydroelectric resources, the emergence of renewable resources for electricity generation, and overall consumer demand are the variables that shape natural gas use in electric generation.

Fuel Use

State of California

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the State. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay Area, and the Central Valley. California oil refineries also

[7] Pacific Gas and Electric Company (PG&E). 2023. Company Profile. Website: https://www.pge.com/en/about/company-information/company-profile.html. Accessed December 11, 2024.

[8] California Energy Commission (CEC). 2023. Energy Consumption by County. Website: http://www.ecdms.energy.ca.gov/elecbycounty.aspx. Accessed December 12, 2024.

[9] California Energy Commission. 2024. Supply and Demand of Natural Gas in California. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california. Accessed October 7, 2024.

process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay Area. Crude oil production in California and Alaska is in decline. According to the EIA, California's field production of crude oil has steadily declined since the mid-1980s, totaling approximately 4,103 million barrels in 2022.[10] At the same time, California refineries have become increasingly dependent on foreign imports.[11] Foreign suppliers provide approximately half of the crude oil refined in California.[12]

The main category of fuel use in California is transportation fuel, specifically gasoline and diesel. According to the EIA, transportation accounted for nearly 41 percent of California's total energy demand, amounting to approximately 2,355.5 trillion BTU in 2020 and 2,784 trillion BTU in 2021.[13] California's transportation sector, including rail and aviation, consumed roughly 524 million barrels of petroleum fuels in 2020 and 2,731 million barrels in 2021.[14] The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the County level. According to the CEC, California's 2022 fuel sales totaled 13,640 million gallons of gasoline and 1,883 million gallons of diesel.

Butte County and City of Chico

Butte County's 2022 fuel sales totaled 63 million gallons of gasoline and 11 million gallons of diesel.[15]

Project Site

Currently, on-site uses consist primarily of abandoned structures and roadways in various states of disrepair that are associated with prior industrial uses, as well as existing RV indoor storage. Natural gas use on the project site is minimal and limited to the RV storage operation.

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various Statewide laws, regulations, and plans, such as the Low Carbon Fuel Standard (LCFS) and Senate Bill (SB) 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with transportation fuels including hydrogen, biodiesel, and electricity. Currently, there are 57 public hydrogen refueling stations and 36 public biodiesel refueling stations in California, none of which are in the City.[16]

[10] California Energy Commission (CEC). California Field Production of Crude Oil. Website: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPCA2&f=M. Accessed December 11, 2024.
[11] California Energy Commission (CEC). 2023. Oil Supply Sources to California Refineries. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/oil-supply-sources-california-refineries. Accessed December 11, 2024.
[12] California Energy Commission (CEC). 2023. Foreign Sources of Crude Oil Imports to California 2021. Website: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports. Accessed December 11, 2024.
[13] United States Energy Information Administration (EIA). 2021. Profile Overview. Website: https://www.eia.gov/state/?sid=CA#tabs-2. Accessed October 9, 2024.
[14] United States Energy Information Administration (EIA). 2021. Total Petroleum Consumption Estimates, 2022. Website: https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_pa.pdf. Accessed December 11, 2024.
[15] California Energy Commission (CEC). 2024. California Retail Fuel Outlet Annual Report. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed December 11, 2024.
[16] Ibid.

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid EVs directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored to use electricity generated onboard the vehicle to power electric motors. Currently, California has approximately 13,836 public EV charging stations, including all charger types, and approximately 35,662 EV supply equipment (EVSE) ports.[17] Currently as of the date of the NOP release, approximately 28 EV charging stations are located within the City, with several located near the project site.[18]

3.6.3 - Regulatory Framework

Federal

Energy Independence and Security Act

The Energy Policy Act of 2005 created the Renewable Fuel Standard Program. The Energy Independence and Security Act of 2007 expanded this program by:

- Expanding the Renewable Fuel Standard Program to include diesel in addition to gasoline.
- Increasing the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- Establishing new categories of renewable fuel and setting separate volume requirements for each one.
- Requiring the United States Environmental Protection Agency (EPA) to apply lifecycle GHG emissions performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

This expanded Renewable Fuel Standard Program lays the foundation for achieving substantial reductions of GHG emissions from the use of renewable fuels, reducing the use of imported petroleum, and encouraging the development and expansion of the nation's renewable fuels sector.

Signed on December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) aims to:

- Move the United States toward greater energy independence and security.
- Increase the production of clean renewable fuels.
- Protect consumers.
- Increase the efficiency of products, buildings, and vehicles.
- Promote research on and deploy GHG capture and storage options.
- Improve the energy performance of the federal government.
- Increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

[17] California Energy Commission (CEC). 2024. California Retail Fuel Outlet Annual Report. Website: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed December 11, 2024.
[18] Ibid.

EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy (CAFE) Standards, the Renewable Fuel Standard Program, and the appliance/lighting efficiency standards.

The EPA is committed to developing, implementing, and revising both regulations and voluntary programs under the following subtitles in EISA, among others:

- Increased Corporate Average Fuel Economy Standards
- Federal Vehicle Fleets
- Renewable Fuel Standard
- Biofuels Infrastructure
- Carbon Capture and Sequestration[19]

EPA and National Highway Traffic Safety Administration Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards Final Rule

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Barack Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016).

The EPA and the NHTSA issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012.[20] The standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles. The final standards are projected to result in an average industry fleet wide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and NHTSA issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became

[19] United States Environment Protection Agency (EPA). Summary of the Energy Independence and Security Act. Website: https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act. Accessed December 11, 2024.

[20] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks.

effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

The State of California has received a waiver from the EPA to have separate, stricter CAFE standards. Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of GHG emissions. In order to manage the State's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the CEC in 1975.

State

Executive Order N-79-20 and Advanced Clean Cars II Regulation

This Executive Order issued by Governor Newsom in 2020, calls for elimination of new internal combustion passenger vehicles by 2035. It also directs the California Air Resources Board (ARB) to pursue a goal of 100 percent medium and heavy-duty vehicles in the State to be zero-emissions by 2045. This establishes a target for the transportation sector that helps put the State on a path to carbon neutrality by 2045. The Advanced Clean Cars II Regulation was adopted subsequently by ARB in August 2022, establishing Zero-Emission Vehicle (ZEV) standards for passenger vehicles for model years 2026-2035. The regulation requires that 35 percent of new vehicles being sold in 2026 be zero-emission, increasing to 68 percent in 2030 and 100 percent by 2035.

California Assembly Bill 1493: Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.[21] The standards applied to 2009 through 2016 model year vehicles. After adopting these initial GHG emission standards for passenger vehicles, the ARB adopted continuing standards for future model years.

The second phase of the implementation for the Pavley Bill was incorporated into amendments to the Low Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation aims to reduce GHGs from new cars by 34 percent from 2016 levels by 2025, which is

[21] California Air Resources Board (ARB). 2014. Clean Car Standards—Pavley, Assembly Bill 1493. Website: https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley. Accessed December 11, 2024.

achieved by reducing pollutants from gasoline and diesel-powered cars, and delivering increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EVs and hydrogen fuel cell cars. By 2035, all new passenger cars, trucks and SUVs sold in California will have zero emissions. The Advanced Clean Cars II regulations will rapidly scale down light-duty passenger car, pickup truck, and SUV emissions starting with the 2026 model year. [22]

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.[23] This measure seeks to reduce public exposure to diesel particulate matter and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location, or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-use Off-road Diesel-fueled Fleets.

This measure regulates oxides of nitrogen (NO_X), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met "best available control technology" requirements. Additionally, this measure requires medium and large fleets to have a written idling policy that is made available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

Starting January 1, 2024, the regulation requires, with some limited exceptions, including for lack of availability, that all fleets procure and use renewable diesel in all vehicles owned or operated in California that are subject to the Off-Road Regulation. Fleets must document and retain records related to the fleet's procurement of renewable diesel.

California Senate Bill 1078: Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established an RPS target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the

[22] California Air Resources Board (ARB). 2024. Website: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii. Accessed December 11, 2024

[23] Thomas Reuters Westlaw. 2024. California Code of Regulations, Title 13. Motor Vehicles. Website: https://govt.westlaw.com/calregs/Index?bhcp=1&transitionType=Default&contextData=%28sc.Default%29. Accessed December 11, 2024.

State's LSEs to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

California SB 350: Clean Energy and Pollution Reduction Act

In 2015, the State legislature approved and the Governor signed SB 350 which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies toward a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 45 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission, the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[24]

Senate Bill 100—The 100 Percent Clean Energy Act of 2018

On September 10, 2018, Governor Newsom signed SB 100, requiring California electricity utility providers to supply all in-state end users with electricity sourced from renewable sources. Specifically, SB 100 accelerates the goals expressed under SB 1078 and requires that the program achieve 50 percent of electricity sourced from renewables by December 31, 2026, 60 percent by December 31, 2030, and 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. This Act amends Sections 399.11, 399.15, and 399.30 of, and adds Section 454.53 to, the Public Utilities Code relating to energy. For clarification, renewable sources, as described herein, includes all renewable sources (e.g., solar, small hydro, wind) but notably omits large-scale hydroelectric and nuclear electricity generation; carbon-free sources include all renewable sources as well as large-scale hydroelectric and nuclear electricity generation.

California Code of Regulations Title 24: Energy Efficiency Standards

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficient technologies and methods. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel

[24] California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed December 11, 2024.

consumption and decreases GHG emissions. The 2022 Building Energy Efficiency Standards went into effect on January 1, 2023.

The latest updates to Part 6 of the Title 24 Building Standards Code requires all new low-rise builds to install photovoltaic (PV) panels that can generate an output greater than or equal to the amount of electricity that a home will consume in one year.

California Code of Regulations Title 24: California Green Building Standards Code

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went into effect on January 1, 2011. The Code is updated on a regular basis, with the most recent update consisting of the 2022 California Green Building Standards Code (CALGreen) that became effective January 1, 2023. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction ordinances and defers to them as the ruling guidance, provided that they provide a minimum 50 percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

CALGreen (California Code of Regulations [CCR] Title 24, Part 11) requires:

- **Stormwater pollution prevention.** Prevent the pollution of stormwater runoff from construction activities through compliance with either a local ordinance or best management practices (4.106.2 [residential], 5.106.1 [nonresidential]).
- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Facilitation for future installation of electric vehicle charging.** Install and clearly identify raceways capable of supporting a 208/240-volt dedicated branch circuit as shown in Table 5.106.5.3.3 (4.106.4 [residential], 5.106.5.3 [nonresidential]).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (4.410.2 [residential], 5.410.1 [nonresidential]).
- **Construction waste**. A minimum 65 percent diversion of construction and demolition waste from landfills. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).

- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
  1. The installation of water-conserving fixtures or
  2. Using nonpotable water systems (5.303.4).
- **Water use savings**. 20 percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or any tenant projected to consume more than 1,000 gallons per day (5.303.1).
- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard (4.501 [residential], 5.404 [nonresidential]).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

California Senate Bill 32

In 2016, the State legislature passed SB 32, giving the ARB the statutory responsibility to include the 2030 target previously contained in former Governor Brown's Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states, "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030." As such, SB 32 lays the foundation for the legislative reduction targets for 2030.

California Public Utilities Code

The CPUC regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Local

City of Chico 2030 General Plan

The City of Chico 2030 General Plan includes various goals, policies, and actions related to sustainability and energy conservation. The following goals, policies, and actions are relevant to this analysis:

Sustainability Element

Goal SUS-5 Increase energy efficiency and reduce nonrenewable energy and resource consumption Citywide.

Policy SUS-5.2 (Energy Efficient Design)–Support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.

Action SUS-5.2.1 (Integration of Energy Efficiency Technology)–Utilize City incentives identified in Action LU-2.3.1 to encourage the integration of energy efficiency measures and renewable energy devices, in addition to those required by the State, during early project review.

Circulation Element

Goal CIRC-1 Provide a comprehensive multimodal circulation system that serves the buildout of the Land Use Diagram and provides for the safe and effective movement of people and goods.

Policy CIRC-1.2 (Project-level Circulation Improvements)–Require new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian, and bicycle facilities.

Goal CIRC-2 Enhance and maintain mobility with a complete streets network for all modes of travel.

Policy CIRC-2.1 (Complete Streets Standards)–Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and GHG emissions; and reinforces the role of the street as a public space that unites the City.

Action CIRC-2.1.1 (Complete Streets Standards)–With consideration of street classification and function, design new streets to accommodate all modes of travel, including transit, bicycles, pedestrians, vehicles and parking.

Action CIRC-2.1.3 (Multimodal Connections)–Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.

Policy CIRC-2.2 (Circulation Connectivity and Efficiency)–Provide greater street connectivity and efficiency for all transportation modes.

Action CIRC-2.2.1 (Connectivity in Project Review)–New development shall include the following internal circulation features:

- A grid or modified grid-based primary street system. Cul-de-sacs are discouraged, but may be approved in situations where difficult site planning issues, such as odd lot size, topography, or physical constraints exist or where their use results in a more efficient use of land, however in all cases the overall grid pattern of streets should be maintained.
- Traffic-calming measures, where appropriate.
- Roundabouts as alternative intersection controls, where appropriate.

- Bicycle and pedestrian connections to adjacent streets, trails, public spaces, and bicycle paths.
- Short block lengths consistent with City design standards.

Action CIRC-2.2.2 (Traffic Management)–Perform routine, ongoing evaluation of the street traffic control system, with emphasis on traffic management, such as signal timing and coordination or the use of roundabouts, to optimize traffic flow along arterial corridors and reduce vehicle emissions.

Goal CIRC-3 Expand and maintain a comprehensive, safe, and integrated bicycle system throughout the City that encourages bicycling.

Policy CIRC-3.3 (New Development and Bikeway Connections)–Ensure that new residential and nonresidential development projects provide connections to the nearest bikeways.

Action CIRC-3.3.1 (Bikeway Requirements)–Require pedestrian and bicycle connections to the citywide bikeway system every 500 feet, where feasible, as part of project approval and as identified in the Bicycle Master Plan.

Goal CIRC-4 Design a safe, convenient, and integrated pedestrian system that promotes walking. Policy CIRC-4.1 (Pedestrian Master Planning)–Continue to integrate and highlight pedestrian access and dual use bicycle and pedestrian pathways in the Bicycle Master Plan.

Policy CIRC-4.2 (Continuous Network)–Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.

Policy CIRC-4.3 (Pedestrian-Friendly Streets)–Ensure that streets in areas with high levels of pedestrian activity, such as near schools, employment centers, residential areas, and mixed-use areas, support safe pedestrian travel by providing elements such as detached sidewalks, bulb-outs, on-street parking, enhanced pedestrian crossings, and medians.

Action CIRC-4.3.1 (Safe Pedestrian Crossings)–As funding allows, improve pedestrian safety at intersections and other crossing locations by providing safe, well-marked pedestrian crossings, bulb-outs, on-street parking, audible warnings, or median refuges that reduce crossing widths.

Action CIRC-4.3.2 (Expand Sidewalk Infrastructure)–As funding allows, continue installation of sidewalk and pedestrian-related infrastructure in areas not currently served.

Goal CIRC-5 Support a comprehensive and integrated transit system as an essential component of a multimodal circulation system.

Policy CIRC-5.3 (Transit Connectivity in Projects)–Ensure that new development supports public transit.

Action CIRC-5.3.1 (Roadway Transit Facilities)–When planning or retrofitting roadways, consult with BCAG [Butte County Association of Governments} regarding the inclusion of transit stops, shelters, bus turnouts, and other transit improvements.

Action CIRC-5.3.2 (Roadway Improvements for New Development)–During project review, consult with BCAG to determine appropriate requirements for the installation of stops and streetscape improvements, if needed to accommodate transit.

Goal CIRC-9 Reduce the use of single occupant motor vehicles.

Policy CIRC-9.1 (Reduce Peak-Hour Trips)–Strive to reduce single occupant vehicle trips through the use of travel demand management strategies.

Action CIRC-9.1.2 (Existing Employer Trip Reduction Programs)–Encourage employers to provide transit subsidies, bicycle facilities, alternative work schedules, ride sharing, telecommuting and work at- home programs, and preferential parking for carpools/vanpools.

Action CIRC-9.1.3 (New Employer Trip Reduction Programs)–As a condition of project approval, require new nonresidential projects that will employ more than 100 people to submit a Travel Demand Management Plan that identifies strategies, such as those listed in Action CIRC-9.1.2, to reduce single occupancy vehicle trips.

Policy CIRC-9.3 (Emphasize Trip Reduction)–Emphasize automotive trip reduction in the design, review, and approval of public and private development.

Community Design Element

Goal CD-3 Ensure project design that reinforces a sense of place with context sensitive elements and a human scale.

Policy CD-3.2 (Bicycle and Pedestrians)–Maintain and enhance the pedestrian- and bicycle-friendly environment of Chico.

Action CD-3.2.1 (Pedestrian-Scale Site Planning)–Utilize design techniques provided in the City's Design Guidelines Manual that support pedestrian- and bicycle-friendly site planning.

Policy CD-3.3 (Pedestrian Environment and Amenities)–Locate parking areas and design public spaces within commercial and mixed-use projects in a manner that promotes pedestrian activity.

Goal H.7 Encourage energy efficiency in housing.

Policy H.7.1 Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code, and reduce long-term housing costs through planning and applying energy conservation measures.

City of Chico Climate Action Plan and Climate Action Plan Update

The Climate Action Plan (CAP) Update establishes a robust framework for helping the City achieve its 2030 GHG targets while accommodating growth. The CAP Update includes relevant policies to reduce energy-related emissions, which are shown below.

Action E-1-1 Provide carbon neutral electricity to the community .

Action E-1-2 Partner with Butte Choice Energy to conduct community outreach and track opt-out rates.

Action E-2-1 Require new construction to be all-electric.

Action E-3-1 Electrify existing residential buildings.

Action E-3-6 Identify and partner with stakeholders to conduct electrification outreach, promotion, and education.

Action E-2-1 Contemplates the City's adoption of an ordinance that would ban the installation of natural gas in new residential and commercial buildings to the extent electrification can be accomplished in a feasible, cost-effective manner. Currently, there may be legal barriers to the City's adoption of an ordinance that bans natural gas. That said, the CAP Update recognizes the importance of reducing natural gas usage in both existing and new buildings, subject to cost effectiveness and other feasibility considerations. For new residential uses and many commercial uses, the feasibility of not utilizing natural gas has been increasing. The CAP Update recognizes the challenges associated with retrofitting existing buildings to convert these structures to all-electric use from a physical and economic feasibility.

3.6.4 - Methodology

For the purposes of this Draft EIR, the approach to analysis for energy use is based on the 2024 California Environmental Quality Act (CEQA) Guidelines Appendix F (Energy Conservation). CEQA Guidelines Appendix F is focused on energy conservation through the efficient use of energy resources. Estimates of energy consumption associated with the proposed project are based, in part, on information provided by the California Emissions Estimator Model (CalEEMod) output included in this Draft EIR as Appendix C. CalEEMod contains energy intensity rates for the various land uses selected (see Section 3.3, Air Quality, and Section 3.8, Greenhouse Gas Emissions, for detailed information on how energy estimates are determined).

Furthermore, the proposed project is assessed for whether it would conflict with or obstruct a State or local plan for renewable energy or energy efficiency. To achieve this, the proposed project is assessed for its consistency with State plans related to energy efficiency and renewable energy.

3.6.5 - Thresholds of Significance

The City, as Lead Agency, utilizes the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts related to energy are significant environmental effects. Would the proposed project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

3.6.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development and operation of the proposed project and provides feasible mitigation measures where appropriate.

Energy Use

Impact ENER-1:	**The proposed project may result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.**

Impact Analysis

The methodology employed in this analysis, which focuses on determining whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources, follows the guidance provided in Appendix F of the CEQA Guidelines as well as the analytical precedent set by relevant caselaw including, for example, League to Save Lake Tahoe *Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th 63, 164-168.

Construction Impacts

For the purposes of the analysis herein, the overall construction timeline for the proposed project is expected to occur over approximately 17 years, between 2024 and 2041. If the construction schedule moves to later years, total energy consumption resulting from project construction would likely decrease as a result of improvements in technology and more stringent regulatory requirements as older, less efficient equipment is replaced by newer and cleaner equipment. Construction of the proposed project would require demolition, site preparation, grading, building construction, architectural coating, and paving activities. Project construction would require energy for the manufacture and transportation of building materials, preparation of the project site (e.g., demolition, site clearing, and grading), and the actual construction of the proposed buildings and related improvements. Petroleum-based fuels such as diesel fuels and gasoline would be the primary sources of energy for these tasks.

The types of on-site equipment used during the construction of the proposed project could include gasoline- and diesel-powered construction and transportation equipment, including trucks, bulldozers, graders, front-end loaders, forklifts, and cranes. As shown in Table 3.6-1, construction equipment is estimated to consume a total of approximately 746,252 gallons of diesel fuel over the entire construction duration.

The proposed project would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and relevant caselaw (including the recent Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th at pp. 164-168), the proposed project would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources (including consideration of whether additional renewable energy features can be added to the proposal being evaluated).

Fuel use associated with construction vehicle trips generated by the proposed project was also estimated including construction worker trips, haul truck trips for material transport, vendor trips for construction material deliveries, and on-site truck trips. Fuel use from these vehicles traveling to/from the project site was based on (1) the projected number of trips the proposed project would generate during construction, (2) average trip distances by trip type, and (3) fuel efficiencies estimated in the ARB Emissions Factors (EMFAC) mobile source emission model. Appendix C provides the specific parameters used to estimate fuel usage. Soil hauling distances would vary depending on the nature of the contamination. For the worst-case arsenic-impacted waste soils, the anticipated haul route would be via State Route (SR) 99 to the Potrero Hills Landfill Facility at 3675 Potrero Hills Lane in Suisun City, Solano County, California, approximately 130 miles, one way. Lead impacted waste soils would be hauled to the Chemical Waste Management, Inc. Disposal Facility at 17629 Cedar Springs Lane in Arlington, Oregon, approximately 521 miles one way. For conservative estimates of impacts, it was assumed that all soils were transported a one-way distance of 521 miles.

In total, the proposed project is estimated to generate approximately 3,174,683 Vehicle Miles Traveled (VMT) and a combined approximately 254,751 gallons of gasoline and diesel for on-road vehicle travel during construction. Table 3.6-1 shows the yearly, combined diesel and gasoline fuel usage for off-road equipment and vehicle trips during construction.

Table 3.6-1: Construction Fuel Usage Estimates in Gallons (Diesel + Gasoline Combined)

Calendar Year	Off-road Construction Equipment (approx.)	On-Road Vehicles (Worker, Vendor and Haul) (approx.)	Total (approx.)
2024	70,861	154,041	224,902
2025	57,024	10,089	67,113
2026	85,091	13,360	98,451
2027	66,380	10,995	77,375
2028	81,467	11,973	93,440
2029	46,852	6,990	53,842

Calendar Year	Off-road Construction Equipment (approx.)	On-Road Vehicles (Worker, Vendor and Haul) (approx.)	Total (approx.)
2030	65,833	12,002	77,835
2031	30,658	6,223	36,880
2032	30,658	6,223	36,880
2033	26,960	5,815	32,775
2034	24,992	2,309	27,300
2035	13,914	1,285	15,199
2036	49,234	4,548	53,782
2037	35,320	3,263	38,583
2038	35,320	3,263	38,583
2039	–	–	–
2040	12,844	1,187	14,030
2041	12,844	1,187	14,030
Total	**746,252**	**254,751**	**1,001,002**

Note: Per project schedule no construction is slated for 2039.
Source: FirstCarbon Solutions (FCS). 2024

The proposed project's construction is not anticipated to result in unusually high energy use because the construction schedule would follow a normal 5 days per week schedule and construction equipment used would be standard. Compliance with applicable State laws and regulations and the required Air District construction Best Management Practice (BMP) measures, which are included as Mitigation Measure (MM) AIR-3, would ensure that idling is limited from both on-road and off-road diesel-powered equipment. Furthermore, MM AIR-1 would require the use of construction equipment which meets the ARB and EPA Tier 4 Final emission standards for engines greater than 50 horsepower during project construction, to the extent available. Although MM AIR-1 and AIR-3 would not be required to reduce energy impacts to less a than significant level, because they are intended to reduce air quality emissions, these mitigation measures would provide a co-benefit of reducing construction equipment fuel consumption because reducing idling and the use of cleaner equipment uses less fuel. In addition, the location of the project site in an urban area near regional routes of travel, public transit, and downtown Chico, helps to reduce the risk of the proposed project's construction resulting in unusually high fuel consumption from construction workers and vehicles traveling exceptionally long distances to reach the project site.

Further, it is reasonable to assume that the overall construction schedule and process would be designed and implemented to be as efficient as feasible to avoid excess monetary costs. This is because equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for further future efficiency gains during construction are limited. Furthermore, California Code of Regulations,

Title 13, Sections 2449(d)(3) and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB, which helps to reduce overall energy consumption.

Based on the foregoing, there would not be the potential for the proposed project to result in wasteful, inefficient, and unnecessary consumption of energy during construction because: (1) the inherent financial incentives for developers and contractors to use energy consuming resources in an efficient manner, (2) the location of the project site being in an urban area near regional routes of travel, public transit, and downtown Chico, and (3) the adherence with applicable laws and regulations designed to increase energy efficiency.

For the reasons discussed above, it is anticipated that the construction activities associated with the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Construction-related energy impacts would be less than significant.

Operational Impacts

Building Energy

The operational phase of the proposed project would consume energy as part of building operations and transportation activities. Building operations for the proposed project would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics.

Table 3.6-2 shows the energy usage from building operation for the following milestone years[25]:

Table 3.6-2: Building Energy Usage

Year	Electricity (kWh/yr) (approx.)	Natural Gas (kBTU/yr) (approx.)
2028	5,573,390	8,926,593
2030	7,247,316	9,372,610
2034	9,324,672	9,372,610
2042	11,342,782	9,372,610
Source: FirstCarbon Solutions (FCS). 2024		

The 2023 Public Draft Barber Yard Specific Plan (BYSP) indicates that the proposed project contemplated reliance on natural gas.

As described in Chapter 2, Project Description, the proposed project would include sustainable design features. For example, the proposed project would include installation of EV charging stations in residential and commercial parking areas to incentivize the use of EVs. These design features would reduce overall per capita energy consumption by promoting future EVs to charge and reduce the need for traditional gasoline powered passenger vehicles. The proposed project would be

[25] As explained in Section 3.3, Air Quality, these milestone years reflect various rates of residential population (35, 50, 80, and 100 percent) as the proposed project is gradually built out until full buildout in 2042.

required to include solar in compliance with applicable provisions in the City of Chico Municipal Code Title 16R, Buildings Standards; Municipal Code Chapter 16R.02.010 indicates the City adopted California Code of Regulations Title 24, Part 6 (Energy Code) standards for residential buildings. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

In addition, the BYSP incorporates a number of features that would help facilitate achievement of the above-referenced energy conservation goals by helping to reduce overall per capita energy consumption as well as reliance on fossil fuels such as coal, natural gas, or oil. For example, as detailed in Chapter 5 of the BYSP, the specific plan is designed with an interconnected network of complete streets that will emphasize walkability over drivability, while accommodating all modes of travel. The BYSP transportation plan emphasizes walk/roll and scooter/skate/bike options over single occupancy vehicle driving options. Further, the BYSP embraces emerging technologies that will likely reduce per capita GHG emissions and increase energy conservation, including home goods delivery, automated vehicles/shuttles, shared bicycle/scooter services, curbside congestion management, and the continuing trend of on-demand ride hailing services (e.g., Uber, Lyft, etc.).

Compliance with these policies would help ensure that building energy consumption would not result in the use of energy in a wasteful, inefficient, or unnecessary manner. Furthermore, the proposed project would be required to comply with applicable goals and policies of the General Plan and the City's CAP Update, which would further enhance energy conservation.

However, a broad reliance on natural gas to serve the proposed project may result in a significant impact in this regard without mitigation. The City's CAP Update contains several goals and policies that are relevant in this regard. For example, Action E-2-1 contemplates the City's adoption of an ordinance that would ban the installation of natural gas in new residential and commercial buildings to the extent electrification can be accomplished in a feasible, cost-effective manner. Currently, there may be legal barriers to the City's adoption of an ordinance that bans natural gas. That said, the CAP Update recognizes the importance of reducing natural gas usage in both existing and new buildings, subject to cost effectiveness and other feasibility considerations. For new residential uses and many commercial uses, the feasibility of not utilizing natural gas has been increasing. The CAP Update recognizes the challenges associated with retrofitting existing buildings to convert these structures to all-electric use from a physical and economic feasibility.

Mobile Source Energy

Operational energy would also be consumed during vehicle trips associated with the proposed project. Fuel consumption would be primarily related to vehicle use by residents, visitors, and employees associated with the proposed project. With the issuance of Executive Order N-79-20 and the subsequent adoption of the Advanced Clean Cars II Regulation, the proportion of the passenger vehicle fleet that is electric and alternatively fueled is anticipated to increase with each passing year, with an estimated 77 percent of the on-road population being battery electric or plug-in hybrid

technology by the project buildout in 2042. Relevant laws and regulations and their associated effects on fuel consumption reduction are accounted for in the calculation of the proposed project's mobile source energy consumption based on projection from the ARB Vision Modeling performed for the development of the 2020 Mobile Source Strategy. Table 3.6-3 summarizes the proposed project's estimated total VMT per year and the associated mobile source energy consumption for the milestone years. As illustrated in Table 3.6-3, gasoline, diesel, and natural gas consumption from mobile sources would steadily decrease as vehicles Statewide transition to EVs.

Table 3.6-3: Mobile Source Energy Consumption

Buildout Year	Vehicle Miles Traveled (approx.)	Gasoline (gallons) (approx.)	Diesel (gallons) (approx.)	CNG (gallons) (approx.)	Electricity (kW Hour/Year) (approx.)
2028	11,814,611	354,588	53,947	211	728,392
2030	14,492,955	389,327	64,681	250	1,213,316
2034	18,052,837	366,703	74,779	274	2,581,375
2042	20,341,432	222,024	69,825	222	5,403,939

Furthermore, as detailed in Section 3.17, Transportation, the proposed project's diverse mix of land uses, inclusion of numerous pedestrian and bicycle facilities to facilitate connectivity, and proximity to downtown Chico would promote alternative transportation such as walking and biking. In addition, the proposed commercial uses are considered local-serving, which is designed to support the residential uses of the proposed project and the surrounding neighborhood. Customers and visitors are likely to exhibit shorter trip lengths that are influenced by the City's efficient land use pattern, which helps to lower the total VMT created by the proposed project. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary. Impacts would be less than significant.

In summary, the consumption of energy resources (including electricity, natural gas, gasoline, and diesel) during the project construction and with respect to operation of mobile energy sources would not be considered inefficient or wasteful and would result in a less than significant impact, consistent with the guidance derived from Appendix F of the CEQA Guidelines and relevant caselaw, with the incorporation of identified project design features, coupled with compliance with applicable laws, regulations and policies designed to enhance energy efficiency. Moreover, the nature and location of the proposed project, which would involve the densification and/or intensification of urban uses on an under-utilized infill site near downtown Chico, helps to further reduce energy impacts.

The CPUC adopted a new framework in 2022 to review utility natural gas infrastructure in order to help the State transition away from natural gas-fueled technologies. California's energy agencies continue to take steps toward achieving carbon neutrality by 2045 and meeting the State's ambitious 2030 GHG emissions reduction target, including strategies to end sales of natural gas space and water heaters beginning in 2030; updating building standards for an all-electric building code; and

eliminating subsidies for extending natural gas lines to serve new buildings.[26] Therefore, broad use of natural gas as a building energy source may be considered inconsistent with the State's energy goals and therefore may be considered inefficient or wasteful and thus a potentially significant impact in this regard.

Level of Significance Before Mitigation

Less than significant impact for construction-related impacts and for mobile energy sources during project operation.

Potentially significant impact for building energy sources during project operation.

Mitigation Measures

None required for construction-related impacts and for mobile energy sources during project operation.

Required for building energy sources during project operation.

MM ENER-1 New residential uses and new commercial uses without commercial kitchen components, which are located within new buildings, shall be all-electric (i.e., natural gas utility shall not be permitted). However, natural gas usage and/or the extension of existing natural gas infrastructure shall be permitted for the following: (1) new commercial uses with commercial kitchen components that are located within new buildings; and (2) the adaptive reuse of existing building(s) so long as the subject Developer can reasonably document to the City's Planning Director that conversion to all-electric of the subject existing building is not physically and/or economically feasible.

Level of Significance After Mitigation

Less than significant impact.

Energy Efficiency and Renewable Energy Standards Consistency

Impact ENER-2: The proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Impact Analysis

The proposed project would receive electricity and natural gas service from PG&E. In 2022, PG&E obtained 39 percent of its electricity from renewable energy sources while the remaining electricity was sourced from nuclear (49 percent), large hydroelectric (8 percent), and natural gas (5 percent).[27] PG&E also offers a Solar Choice 50 percent option that sources 67 percent of its power mix from

[26] California Public Utilities Commission (CPUC). 2022. CPUC Creates New Framework to Advance California's Transition Away from Natural Gas. Website: https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-creates-new-framework-to-advance-california-transition-away-from-natural-gas. Accessed December 11, 2024.

[27] California Energy Commission (CEC). 2022. Power Content Label. Website: https://www.energy.ca.gov/filebrowser/download/6048. Accessed December 11, 2024.

eligible renewable energy sources, and a Solar Choice 100 percent option that sources 96 percent of its power mix from eligible renewable energy sources.

PG&E would meet the State's current RPS objective of 33 percent. The proposed project's electricity provider would also be required to meet the State's future RPS objective of 60 percent of in-State electricity sales being generated from renewable energy sources by 2030.

As discussed under Impact ENER-1, the proposed project would be designed in accordance with then-current Title 24 standards. These standards, which are viewed as some of the most stringent in the nation, would include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting. Incorporating the applicable Title 24 standards into the proposed project's design would ensure that the proposed project would not result in the use of energy in a wasteful manner (in most respects) and would help facilitate important State and local goals for energy efficiency. Furthermore, on-site renewable energy sources, such as, for example, solar panels, would be incorporated into the project design to the extent required under applicable laws and regulations. Furthermore, the proposed project would include Tier 2 CALGreen EV charging infrastructure standards and commitment to enroll in a 100 percent renewable electricity service. The foregoing would allow the proposed project to utilize more renewable energy sources as part of its energy supply. Compliance with these aforementioned project design features, as well as mandatory requirements under applicable laws and regulations, would ensure that the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy.

As noted above, the proposed project would be required to comply with the applicable Title 24 Energy Efficiency Standards (for example, EV charging infrastructure and solar requirements) as adopted under Municipal Code Title 16R, Building Standards.[28,29] Furthermore, the proposed project would be required to comply with relevant goals and policies set forth in the General Plan, the CAP Update, and the BYSP. As such, the proposed project would not conflict with or obstruct the applicable plan for renewable energy or energy efficiency. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

[28] 2022 California Green Building Standard Code, Title 24, Part 11. Residential Mandatory Measures. Website: https://codes.iccsafe.org/content/CAGBC2022P1/chapter-4-residential-mandatory-measures. Accessed December 11, 2024.

[29] City of Chico Municipal Code. 16R.02.010, Building Standards–Adoption. Website: https://codelibrary.amlegal.com/codes/chico/latest/chico_ca/0-0-0-21481. Accessed December 11, 2024.

3.6.7 - Cumulative Impacts

The geographic scope of the cumulative energy analysis is the City of Chico. Cumulative projects would be required to comply with all applicable goals, policies and actions, including, among others, those included in applicable City ordinances, the General Plan, and the CAP Update that address energy conservation and energy efficiency, and the latest California Energy Code and Title 24 standards, as described in more detail above. Such required compliance would ensure cumulative projects would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption or energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Accordingly, potential cumulative impacts would be less than significant.

Moreover, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact. As discussed above, the proposed project would generate energy demand during construction and operation, principally consisting of electricity and transportation fuel consumption. The proposed project would consume an increasing amount of electricity and decreasing amount of fossil fuels such as gasoline and diesel over time. Development associated with the proposed project would be designed in accordance with Title 24, California's Energy Efficiency Standards for Residential Buildings. These standards include minimum energy efficiency requirements related to the building envelope, mechanical systems (e.g., HVAC and water heating systems), indoor and outdoor lighting, and illuminated signs. Given the nature and location of the proposed uses, the proposed project's construction is not anticipated to result in unusually high energy use with the incorporation of identified design features, coupled with compliance with applicable laws, regulations and policies designed to enhance energy efficiency. Construction energy demand generated by the proposed project would largely be limited to the activities which would be required for the construction of the proposed project and would normally not constitute the unnecessary, inefficient, or wasteful consumption of energy resources. For example, industry standard limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. Although MM AIR-1 and AIR-3 would not be required to reduce energy impacts to a less than significant level, these mitigation measures would provide a co-benefit of reducing construction equipment fuel consumption because reducing idling engines and the use of cleaner equipment uses less fuel, or no fuel if equipment is turned off. Furthermore, it is reasonable to conclude that the Developer would have a financial incentive to implement various cost efficiencies, to the extent feasible. Additionally, the sustainable design features detailed in Chapter 2, Project Description (as set forth more fully in the BYSP), such as meeting Tier 2 CALGreen energy efficiency standards and Tier 2 CALGreen EV charging infrastructure standards. Moreover, the proposed project would be located near major transportation and public transit facilities on an under-utilized infill site near downtown Chico, which would further reduce potential consumption of transportation energy resources. Furthermore, the proposed project would be required to implement MM ENER-1 requiring the limitation of natural gas infrastructure and therefore use consistent with CAP Action E-2-1. Therefore, the proposed project would not result in the unnecessary, inefficient, or wasteful consumption of energy resources nor would it conflict with applicable plans, policies, or regulations adopted for renewable energy and energy efficiency.

Therefore, the proposed project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to energy consumption.

Level of Cumulative Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

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3.7 - Geology, Soils, and Seismicity

3.7.1 - Introduction

This section describes existing conditions and relevant regulatory framework related to geology, soils and seismicity in the general region and specifically within the Barber Yard Specific Plan (BYSP) Area and off-site improvement area (project site) and vicinity. Additionally, this section evaluates the potential impacts related to geology, soils, and seismicity that could result from implementation of the proposed project. Information included in this section is based, in part, on review of the Chico 2030 General Plan (General Plan) and General Plan Environmental Impact Report (General Plan EIR), Paleontological Record Search results (Appendix G), as well as information provided by the United States Department of Agriculture (USDA) and the United States Geological Survey (USGS).

The following comments related to geology, soils, and seismicity were received during the Notice of Preparation (NOP) scoping period:

- Concerns about soil contamination, given the historic industrial uses at the project site.

Note that testing and treatment of potentially contaminated soils within the BYSP site are addressed in Section 3.9, Hazards and Hazardous Materials.

3.7.2 - Environmental Setting

City of Chico

The City of Chico (City) is located within the Great Valley Geomorphic Province (Great Valley), which includes the Great Central Valley of California. The Great Valley extends 400 miles north to south and 60 miles east to west and is encompassed by the Coast Ranges, the Klamath Ranges, the Cascade Range, and the Sierra Nevada Range. Geophysical evidence suggests that the Great Valley is underlain at depth with granitic rocks of the Sierra Nevada Province. The majority of rocks and deposits found within the Great Valley are sedimentary. The age of these rocks and deposits ranges from Upper Jurassic (between 154 and 135 million years ago) to recent.

The City is underlain by various geologic formations, including the Tuscan Formation, the Chico Formation, the Red Bluff Formation, and the Modesto Formation. The Tuscan Formation consists of a series of layers deposited by streams and mudflows between two and four million years ago. Groundwater in the Sacramento Valley Groundwater Basin, which is within the Great Valley, is contained primarily within the sand and gravel layers of the Tuscan Formation. The topography of the City varies from relatively gentle sloped terrain in the western portion of the City to increasingly hilly terrain at the eastern edge of the City. Average elevation throughout the City is approximately 230 feet above mean sea level.[1]

[1] City of Chico, 2010. Draft Environmental Impact Report. Geology and Soils. September.

Project Site

As discussed above, the project site encompasses the BYSP Area and the off-site improvement area; when conditions differ between areas, the area will be identified specifically. The project site is located in the southwest portion of the City.

The shallow depth alluvial deposits found within the BYSP Area are of recent-age and are principally derived from the outwash of Little Chico Creek north of the BYSP Area and floodplain materials from Comanche Creek, which is located south of the project site.

Geologic mapping indicates that the project site is underlain by the Pleistocene-age Modesto Formation.[2,3] Generally, the same geologic conditions exist in the off-site improvement area located immediately south of the BYSP Area, although with more influence from Comanche Creek due to its proximity.

3.7.3 - Existing Soils

City of Chico

The USDA, Natural Resources Conservation Service's (NRCS) Soil Survey of Butte Area, California, characterizes the soils throughout Butte County (County) and within the City. The most prominent soil types in the City are Bosquejo clay, Almendro loam, and Doemill-Jokerst complex. Bosquejo clay consists of clayey alluvium over loamy alluvium that is derived from volcanic rocks. Bosquejo clays are somewhat poorly drained and have a high shrink-swell potential. Almendro loam consists of loamy alluvium that is derived from igneous, metamorphic, and sedimentary rocks. Almendro loam is well drained and has a moderate shrink-swell potential. The Doemill-Jokerst complex consists of loamy residuum weathered from volcanic breccia and is somewhat poorly drained and has a low shrink-swell potential.

Project Site

According to the USDA Web Soil Survey, the BYSP Area and off-site improvement area surface soils are mapped as "Chico Loam" of 0 to 1 percent slopes, which is considered "Prime Farmland when irrigated." These well drained soils are derived from weathering of the igneous and metamorphic rock formations outcropping east of Chico as well as local alluvial deposits.

Project Site Soil Conditions

As part of a Phase II Site Investigation performed by Cameron-Cole, a subsurface investigation, soil gas investigation, and soil investigation were performed. The subsurface investigation focused on the BYSP Area and the off-site improvement area.

The Phase II Site Investigation confirmed the presence of arsenic and lead in the soil at the project site at concentrations exceeding Soil Screening Levels (SSLs). Where contaminated soils require

[2] Saucedo, G.J., and D.L. Wagner. 1992. Geologic map of the Chico Quadrangle, California, 1:250,000. Regional Geologic Map RGM-7A. California Geological Survey. Map. Scale 1:250,000.

[3] Finger, Kenneth L., PhD. 2022. Paleontological Records Search for the Barber Yard Specific Plan Project (1723.0003), City of Chico, Butte County. September 7, 2022.

removal, engineered fill may be imported but would require testing and engineering to ensure to ensure suitability–from a geotechnical perspective–in accordance with the California Building Standards Code (CBC). Engineering specifications for imported fill would be included in a site-specific geotechnical report.

Further discussion regarding the removal of contaminated soil at the project site can be found in Section 3.9, Hazards and Hazardous Materials.

Seismicity

The term seismicity describes the effects of seismic waves that are radiated from an earthquake fault in motion. Seismicity can result in seismic-related hazards such as fault rupture and ground shaking. Liquefaction faults can form in rocks when stresses overcome the internal strength of the rock. Fault rupture can occur when movement on a fault breaks through to the surface and results in damage to infrastructure and persons. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. Strong ground shaking from an earthquake can result in damage, with buildings shifted off their foundations and underground pipes broken. Liquefaction occurs when an earthquake causes ground shaking that results in saturated soil to lose shear strength, deform, and act like a liquid. When liquefaction occurs, it can result in ground failure that can result in damage to roads, pipelines, and buildings.

City of Chico

An “active” fault, as defined by the 1994 Alquist-Priolo Earthquake Fault Zoning Act, is one that shows displacement within the last 11,000 years and therefore is considered more likely to generate a future earthquake and surface rupture than a fault that shows no sign of “recent” rupture. There are no active faults within the City, although there are several faults located outside the City limits but in the vicinity of the City’s Planning Area which are potentially active. These include the Sutter Buttes Faults, Dunnigan Fault, Camel’s Peak Fault, Melones-Dogwood Peak Faults, Hawkins Valley Fault, and the Monocline Fault. The Monocline Fault was considered potentially active, as noted in an unpublished 1988 report by the California Geologic Survey (CGS). The Monocline Fault extends northwesterly from the City and, based on its length of 42 miles, could potentially produce at least a magnitude 7.0 earthquake.

The only known active fault in Butte County is the Cleveland Hills Fault south of Oroville. The Cleveland Hills Fault is within an Earthquake Fault Zone as mapped by the Alquist-Priolo Earthquake Fault Zoning Act. The Sierra foothills contain hundreds of mapped faults, dozens of which are located in Butte County, but most of these faults are not considered active, are very short, and thus are probably not capable of producing severely damaging earthquakes.[4]

[4] City of Chico, 2010. Draft Environmental Impact Report. Geology and Soils. September.

Project Site

According to the California Department of Conservation's Fault Activity Map of California, no faults are located on the project site. The nearest fault to the project site is the potentially active Monocline Fault, which is located approximately 4 miles northeast of the project site.[5]

Slope Disturbance, Landslides, and Liquefaction

City of Chico

Slope disturbance from long-term geologic cycle of uplift, mass wasting, intense precipitation or wind, and gravity can result in slope failure in the form of mudslides and rock fall. Although the County contains one identified potentially active fault, there are several potentially active faults in the vicinity of the City's Planning Area. Specifically, rocks that comprise the slopes of the foothills along the eastern portion of the City's Planning Area are especially susceptible to earthquake-induced disturbance.[6]

Mass wasting refers to a variety of erosional processes, from gradual downhill soil creep to mudslides, debris flows, landslides, and rock fall—processes that are commonly triggered by intense precipitation or wind, which varies according to climactic shifts. Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil. Soil creep is a long-term, gradual downhill migration of soil under the influence of gravity and is generally on the order of a fraction of an inch per year. These soils can creep away downslope sides of foundations and reduce lateral support. The areas of highest landslide potential within the County are in the mountainous central area of the County where well-developed soils overlay impervious bedrock on steep slopes which at times undergo heavy rainfall. The slopes around flat uplands, such as Table Mountain, are also highly susceptible to landslides. Most of the rest of the County has moderate to low landslide potential. The majority of the City, including the project site, has no potential to low potential for landslides due to the lack of significant slopes.[7]

Within the County, soils with no or low expansion potential occur along stream and river valleys and on steep mountain slopes. Soils of high expansion potential generally occur in the level areas of the Sacramento Valley, including around the population centers of Chico, Oroville, Biggs, and Gridley. Furthermore, many of the soils found within the City have a moderate to high shrink-swell potential. The most abundant soil in the City, Bosquejo clay, consists of clayey alluvium with high shrink-swell potential.[8]

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. The soil can lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils. The City in general has a low to moderate risk for liquefaction.

[5] California Department of Conservation, 2015. Fault Activity Map of California. Online at: https://maps.conservation.ca.gov/cgs/fam/. Accessed October 17, 2024.
[6] City of Chico. 2010. Draft Environmental Impact Report. Section 4.8 Geology and Soils. September.
[7] City of Chico. 2010. Draft Environmental Impact Report. Section 4.8 Geology and Soils. September.
[8] Ibid.

Project Site

The project site is relatively flat and low in elevation (180 to 200 feet above mean sea level). The project site does not contain active faults that would cause geologic uplifting or ground rupture, nor does the site contain steep slopes that would be susceptible to landslides. The project site is located within an area of moderate liquefaction potential.[9]

Paleontological Resources

City of Chico

As previously indicated, the City is underlain by various geologic formations including the Tuscan Formation, the Chico Formation, the Red Bluff Formation, and the Modesto Formation.

The Tuscan Formation underlies eastern positions of the City's Planning Area and consists of a series of layers between two and four million years of age deposited by streams and mudflows. The Tuscan Formation is of Pliocene age and consists of volcanic mudflows, tuff, breccia, sandstone, and ash deposits.

The Chico Formation occurs in both the Big Chico Creek and Little Chico Creek canyons, as well as along Butte Creek. The Chico Formation is characterized by its yellowish-brown color, fine-grained texture, and the presence of fossilized shells. The Chico Formation consists of sandstone, siltstone, limestone, and conglomerate and accumulated along the shore of the Pacific Ocean during the Cretaceous period of the Mesozoic Era.

The Red Bluff Formation is the oldest Pleistocene alluvial terrace deposit and covers broad areas of the northern Sacramento Valley, including some of the City's Planning Area. The Red Bluff Formation has eroded away in most of the area in and around the City due to its age (between half a million and one million years old).

The Modesto Formation overlies the Riverbank, Tehama, and Tuscan Formations in much of the Sacramento Valley. The Modesto Formation consists of sand, silt, and clay seams deposits by river during the Pleistocene Age, from 42,000 to 14,000 years ago. The Modesto Formation underlies significant portions of the City's Planning Area.[10]

Project Site

A Paleontological Records Search was conducted for the BYSP Area and off-site improvement area by Kenneth L. Finger, PhD (Appendix F) on September 7, 2022. The project site and all areas located within the 1-mile search area are upon the Pleistocene-age Modesto Formation (Qm). There were nine vertebrate localities listed for the Modesto Formation, three of which are in San Joaquin County; the remaining six localities are in Stanislaus, Fresno, and Yolo counties. These six localities are represented by 27 specimens from the Rancholabrean North American Land Mammal Stage. The

[9] Butte Creek Watershed Conservancy. Butte Creek Watershed Floodplain Management Plan. Liquefaction Potential. Website: http://www.buttecreekwatershed.org/Watershed/FMP_Map-C7.pdf Accessed October 17, 2024.
[10] City of Chico. 2010. Draft Environmental Impact Report. Section 4.8 Geology and Soils. September.

locality nearest to the project site is approximately 60 miles to the south. The Modesto Formation also includes two plant localities, one in Fresno County and one in Sutter County.

The Modesto Formation has a high sensitivity but a low paleontological potential for significant paleontological resources. Despite the yield of significant fossils from the Modesto Formation, none have been recovered in Butte County or within 60 miles of the City.

3.7.4 - Regulatory Framework

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the United States Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals are as follows:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- USGS of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) (Order WQ 2022-0057-DWQ, NPDES No. CAS000002, authorized by Section 402(p) of the federal Clean Water Act, controls water pollution by regulating point sources, such as construction sites and industrial operations that discharge pollutants into waters of the United States.

The General Permit regulates the discharge of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb 1 acre or more of land surface or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and utility lines.

The General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to control discharges from a project site, including soil erosion, to protect waterways. A SWPPP describes the measures or practices to control discharges during both the construction and operational phases of the project. A SWPPP identifies project design features including structural and nonstructural Best Management Practices (BMPs) that will be used to control, prevent, remove, or reduce stormwater pollution from the site, including sediment from erosion.

The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Board (RWQCB) issues the General Permit and administers the SWPPP program to ensure developers are in compliance with NPDES requirements.

Excavation Rules and Regulations

Title 29 in the Code of Federal Regulations, Part 1926, Subpart P contains rules and regulations for site excavations. Subpart P applies to all open excavations made in the earth's surface. Specific excavation requirements regulate surface encumbrances, underground installations, access and egress, hazardous atmospheres, stability of structures, protection of employees from loose rock or soil, inspections, and walkthroughs.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate State or federal agency and agree to donate any materials recovered to recognized public institutions where they would remain accessible to the public and other researchers.

Society of Vertebrate Paleontology Guidelines

The Society of Vertebrate Paleontology, a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen preparation, analysis, and curation. Most practicing professional paleontologists in the nation adhere to the Society of Vertebrate Paleontology's assessment, mitigation, and monitoring requirements, as specifically spelled out in its standard guidelines.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] § 2621 to § 2630) was passed in 1972 to provide a statewide mechanism for reducing the hazard of surface fault rupture to structures used for human occupancy. The main purpose of the Act is to prevent the siting of buildings used for human occupancy across the traces of active faults. It should be noted that the Act addresses the potential hazard of surface fault rupture and is not directed toward other earthquake hazards, such as seismically-induced ground shaking or landslides.

The law requires the State Geologist to identify regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults and to depict these zones on topographic base maps, typically at a scale of 1 inch to 2,000 feet. Earthquake Fault Zones vary in width, although they are often 0.75-mile wide. Once published, the maps are distributed to the affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. With the exception of single-family wood frame and steel-frame dwellings that are not part of a larger development (i.e., four units or more), local agencies are required to regulate development within the mapped zones. In general, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC §§ 2690–2699.6), which was passed in 1990, addresses earthquake hazards other than surface fault rupture. These hazards include strong ground shaking, earthquake-induced landslides, liquefaction, or other ground failures. Much like the Alquist-Priolo Earthquake Fault Zoning Act discussed above, these seismic hazard zones are mapped by the State Geologist to assist local government in the land use planning process. The Act states, “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.” The Act also states, “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Standards Code

The California Building Standards Code (CBC) is Part 2 of 13 parts of the official compilation and publication of the adoption, amendment, and repeal of building regulations to the California Code of Regulations, Title 24, which is referred to as the CBC.

The current version of the CBC was published by the California Building Standards Commission on July 1, 2022, and is based on the 2021 International Building Code (IBC) with modifications for California conditions to include more detailed and/or more stringent regulations. The State of California provides minimum standards for building design through the CBC. Where no other building codes apply, Chapter 29 of the CBC regulates excavation, foundations, and retaining walls.

The State earthquake protection law (California Health and Safety Code § 19100, *et seq*.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and

earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

The CBC is updated every 3 years, and the current 2022 CBC took effect January 1, 2023. The 2022 CBC has been adopted by the City of Chico according to Title 16R Building Design Standards, Section 16R.02.010 Adoption of Standards of the City of Chico Municipal Code (Municipal Code).

California Public Resources Code

California Public Resources Code Section 5097 specifies procedures for unexpected discovery of paleontological resources. California Public Resources Code Section 5097.5 states that no person shall knowingly and willfully excavate upon or remove, destroy, injure, or deface any vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other paleontological feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.

Local

City of Chico 2030 General Plan

The General Plan establishes the following goals, actions and policies associated with geology, soils, and seismicity that are relevant to this analysis:

Safety Element

Goal S-1 Minimize the loss of life and property resulting from natural and human-caused hazards.

Goal S-3 Protect lives and property from seismic and geologic hazards.

Policy S-3.1 To the greatest extent feasible, prevent damage to new structures caused by seismic, geological, or soil conditions.

Action S-3.1.1 Require all new buildings in the City to be built under the seismic requirements of the California Building Standards Code.

Action S-3.1.2 In areas with highly expansive soils require appropriate studies and structural precautions through project review.

City of Chico Municipal Code

Chapter 15.50

Municipal Code Chapter 15.50 governs stormwater management and discharge controls. The chapter prescribes regulations that prohibit non-stormwater discharges to the City's storm drain system, reduce pollutants in stormwater discharges, and minimize degradation of water quality from construction-related activities. The regulations require applicants for development projects

disturbing over 1 acre to file a SWPPP with the State to gain coverage of the activity under the City's Construction General Permit.

Chapter 16.28.030. A.20.b–Tentative Subdivision Map

This chapter subsection requires that, as part of a tentative subdivision map, a preliminary soil investigation and geological reconnaissance report be prepared by a registered Civil Engineer, Engineering Geologist, or Geologist specializing and recognized in soil mechanics and foundation engineering.

Chapter 16.28–Grading regulations–Permits

This chapter requires all grading work within the City to obtain a grading permit. As part of grading permit application, a grading plan must be submitted to show that such work will conform to the grading standards and any other applicable laws, regulations, and conditions, including but not limited to the incorporation of recommendations provided in a soil engineering report or engineering geology report.

Chapter 16R.02–Building Standards

This chapter adopts the 2022 CBC, as promulgated in Title 24 of the California Code of Regulations, including all regulations adopted in the CBC amending or repealing a volume chapter, section, or appendix of the International Building Code; as such, all new construction, as well as preservation, restoration, or rehabilitation of historical buildings within the city limits are required to adhere to its seismic safety standards. The City of Chico Community Development Department is responsible for the administration and enforcement of the CBC.

3.7.5 - Methodology

Evaluation of potential geologic, soils, and seismicity impacts of the proposed project were based, in part, on review of available documentation, including the General Plan and related General Plan EIR and the USDA Natural Resource Conservation Web Soil Survey, and review of applicable State and local laws and regulations. In addition, this impact analysis considered information contained in the Phase II Environmental Site Investigation Report prepared for the BYSP Area and off-site improvement area, which is provided in Appendix G.

Impacts to paleontological resources were determined by reviewing the Paleontological Records Search (Appendix F) prepared by Dr. Kenneth Finger, a consulting Paleontologist. Dr. Finger performed a records search on the University of California Museum of Paleontology (UCMP) database for the BYSP Area and off-site improvement area.[11]

3.7.6 - Thresholds of Significance

The City, as Lead Agency, in its discretion has decided to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine

[11] Finger, Kenneth L., PhD. 2022. Paleontological Records Search for the Barber Yard Specific Plan Project (1723.0003), City of Chico, Butte County. September.

whether impacts to geology, soils and seismicity are significant environmental effects. Would the proposed project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (The proposed project will have no significant impacts related to this threshold; therefore, this criteria is addressed in Chapter 4, Effects Found not to be Significant).

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.7.7 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides feasible mitigation measures where necessary.

Earthquakes

Impact GEO-1: **The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:**

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

Impact Analysis

i) Ground Rupture

The California Department of Conservation's Fault Activity Map of California indicated that there are no faults located on the project site. The nearest fault to the project site is the potentially active Monocline Fault, which is located approximately 4 miles northeast of the project site. This distance from a known earthquake fault precludes the possibility of ground rupture on the project site as a result of seismic activity on a fault. Therefore, impacts related to fault rupture would be less than significant.

ii) Strong Seismic Ground Shaking

Factors determining the intensity of ground shaking include the size of the earthquake and the distance and depth of the earthquake. The Seismic Hazards Zonation Program of the CGS categorizes Butte County as a seismic hazard zone. The Cleveland Hills Fault, located approximately 17 miles southeast of the City, is the only known active fault within the County. However, as noted above, the nearest potentially active fault is the Monocline Fault located approximately 4 miles northeast of the project site.

According to the General Plan EIR, the Monocline Fault, which extends northwesterly from the City, is considered potentially active. Based on the fault's length, it is possible that the fault could produce at least a magnitude 7.0 earthquake. An earthquake of this magnitude could cause major damage to the General Plan Planning Area, which includes the project site.[12]

The City has adopted the 2022 CBC as noted in Chapter 16R.02 of the Municipal Code, which includes design criteria for seismic loading and other geologic hazards for both new and existing structures. General Plan Policy S-3.1 and Action S-3.1.1 require that all new developments comply with the seismic requirements of the CBC. Municipal Code Section 18.07.030 requires that, as part of the tentative subdivision map, a preliminary soil investigation must be submitted. Furthermore, per Municipal Code Section 16.28.030, future development within the BYSP Area would be required to obtain a grading permit, which necessitates a soil engineering report or engineering geology report and the inclusion of resulting recommendations within the grading plan. This would ensure that on-site soils are adequate for proposed buildings and that all building foundations are stable prior to project construction pursuant to the comprehensive regulatory framework governing these issues. Therefore, compliance with General Plan policies and the Municipal Code and all other applicable laws and regulations would ensure that impacts related to ground shaking would be less than significant.

iii) Seismic-related Ground Failure

Liquefaction describes the behavior whereby a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually strong ground shaking during an earthquake. A low relative density and loose consistency of the granular materials, shallow groundwater table, long duration, and high acceleration of seismic shaking are some of the factors which can cause liquefaction. As discussed previously, the City generally has a low to moderate risk for liquefaction, and the project site has moderate risk for liquefaction. Compliance with Municipal

[12] City of Chico. 2010. Draft Environmental Impact Report. Section 4.8 Geology and Soils. September.

Code Section 16.28 would require a site-specific soil engineering or engineering geology report and the inclusion of resulting recommendations in the grading plan to address on-site risk of liquefaction. The proposed project would be required to adhere to all other applicable laws and regulations addressing liquefaction and ground failure in connection with each individual specific development proposal. Therefore, impacts would be less than significant in this regard.

iv) Landslides

Susceptibility to landslide risk is increased where a property contains steep slopes, exposed hillsides, or near-vertical cuts often found near creek banks. Several types of landslides, such as rock falls, have the potential to occur in conjunction with earthquakes. The size and area impacted by earthquake-induced landslides depends on the magnitude, distance, depth, and duration of the ground shaking. According to the General Plan EIR, the rocks that comprise the foothills along the eastern portion of the General Plan Planning Area are susceptible to earthquake-induced landslides. As noted previously, the project site, however, is relatively flat and is not in the vicinity of steep slopes or located within 2 miles of the foothills identified by the General Plan EIR as having potential for earthquake-induced landslides.

Therefore, the project site does not contain significant potential for landslides. Moreover, the proposed project would be required to adhere to all applicable laws and regulations addressing landslides. Thus, implementation of the proposed project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death, involving a landslide hazard, and impacts related to landslides would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Soil Erosion or Topsoil Loss

Impact GEO-2:	**The proposed project would not result in substantial soil erosion or the loss of topsoil.**

Impact Analysis

Construction

Soil erosion and topsoil loss occurs when soil materials are transported or washed away to another area by wind or water. The proposed project would involve construction activities such as grading, building demolition and construction, paving, and utility installation that may cause erosion and sedimentation. In the absence of existing regulations, the accumulation of sediment in downstream waterways could result in the blockage of flows, potentially causing increased localized ponding or

flooding as well as increasing pollutant load. (See Chapter 3.10, Hydrology and Water Quality for additional information and analysis in this regard.)

During construction, development within the project site would include grading, excavation, and other ground disturbance that would expose on-site soils. Because the proposed project would result in the disturbance of at least 1 acre of land, the developer would be required to submit a SWPPP to the State to obtain coverage under the General Permit from the State Water Board and comply with its conditions and requirements, which are designed to minimize potential erosion issues.

Consistent with Chapter 15.50, Storm Water Management and Discharge Controls, of the Municipal Code, compliance with the City's NPDES permit would ensure that applicants for development on any project parcel obtain and implement a SWPPP including BMPs that would prevent sediments and other pollutants from entering the stormwater system. Applicable BMPs may include, among others, hydroseeding, biodegradable erosion control blankets, silt fences at downstream storm drain inlets, and post-construction clearing of accumulated debris and sediment in drainage structures. Additionally, compliance with Municipal Code Chapter 16.28, Grading Regulations, would ensure the each developer within the proposed project would obtain approval of and implement a grading plan during construction, which would prevent significant erosion of soils. Therefore, with adherence to the requirements stated above and all other applicable laws and regulations in this regard, impacts from construction would not result in substantial soil erosion or loss of topsoil and therefore impacts would be less than significant.

Operation

Once the proposed project is developed, the potential for soil erosion or the loss of topsoil would be low due to the flat topography and presence of new structures, concrete, asphalt, and landscaping. The proposed stormwater basin would catch potential sediment before it enters downstream waters. In addition, the proposed project would be required to adhere to all applicable laws and regulations, including the NPDES General Permit, which includes permanent post-construction BMPs that manage stormwater runoff rates to match pre-construction project site hydrology. The post-construction BMPs would help to ensure there is no substantial soil erosion or loss of topsoil during project operations. Therefore, impacts related to soil erosion and loss of topsoil would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Unstable Geologic Location

Impact GEO-3:	**The proposed project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.**

Impact Analysis

As previously noted, the project site is relatively flat and does not contain steep slopes, exposed hillsides, or vertical cuts. Therefore, the project site does not contain significant potential for landslides or lateral spreading.

Subsidence refers to the downward movement of the ground surface, usually as a result of groundwater withdrawal. Subsidence is common within the Sacramento Valley, within which the City and the project site are located, and large areas of the San Joaquin Valley. According to the General Plan EIR, no occurrences of subsidence have been observed within the County. However, land subsidence is still considered to be a potential hazard for those areas of the County located within the Sacramento Valley, including areas extending 2 miles north and south of the City where heavy groundwater withdrawal has occurred. Therefore, there is the possibility for subsidence to occur on-site.

According to the General Plan EIR, soils within the Planning Area generally exhibit a low to moderate risk for liquefaction. Generally, the eastern portion of the Planning Area has a low liquefaction potential, while areas within the city limits, including the project site, and to the west have a moderate risk for liquefaction. As such, there is the potential for liquefaction to occur on-site.

As discussed previously, development within the project site would be required to obtain a grading permit, which would require the incorporation of a site specific soil engineering report or engineering geology report and resulting recommendations including those pertaining to subsidence and liquefaction, as necessary. Each developer within the project, in connection with its individual specific development proposal, would be required to implement the foregoing recommendations and adhere to all other applicable laws and regulations with regard to adequate soil preparation during grading. As such, impacts related to unstable geologic location would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Expansive Soil

Impact GEO-4: The proposed project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Impact Analysis

Expansive soils are soils with a significant amount of clay particles that have the ability to release water (shrink) or absorb water (swell). Fine-grained soils, such as silts and clays, may contain variable amounts of expansive clay minerals. When these soils swell, the change in volume exerts significant pressures on loads that are placed on them. This shrink-swell movement can adversely impact building foundations, often causing them to crack or shift, resulting in damage to the buildings they support. These adverse effects upon buildings from shrink-swell soils can typically be avoided by following recommendations found in required soils reports, such as designing the building's foundation with spread footings.

According to the General Plan EIR, soils with no or low expansion potential generally occur along stream and river valleys and on steep mountain slopes within the County. Soils of high expansion potential generally occur in the level areas of the Sacramento Valley, within which the City, including the project site, are located. Many of the soils found within the General Plan Planning Area have a moderate to high shrink-swell potential. Bosquejo clay, the most abundant soil found in the General Plan Planning Area, consists of clayey alluvium with high shrink-swell potential. As noted previously, the project site's surface soils are mapped as "Chico Loam" by the USDA Web Soil Survey. Chico loam is described as well drained and consists of approximately 23 percent clay.[13] As such, there is the potential for expansive soils to occur on-site. However, as previously discussed, per Municipal Code Section 16.28.030, the proposed project would be required to obtain a grading permit which requires a soil engineering report or engineering geology report and the inclusion of resulting recommendations within the grading plan, including those related to expansive soils, as necessary. Therefore, impacts related to expansive soils would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

[13] United States Department of Agriculture (USDA). 2023. Natural Resources Conservation Service. Web Soil Survey. Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed December 11, 2024.

Destruction of Paleontological Resource or Unique Geologic Feature

Impact GEO-5: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis

Construction

As described above, the Paleontological Records Search completed for the project site concluded that the Modesto Formation upon which the project site is located has a high sensitivity but a low paleontological potential for significant paleontological resources (Appendix F). While it is unlikely that paleontological resources exist within or near the project site, there is always the possibility that subsurface construction activities associated with the proposed project, such as grading or trenching, could potentially damage or destroy previously undiscovered paleontological resources. Mitigation Measure (MM) GEO-1 specifies the procedures to follow in the event that any vertebrate remains are unearthed. As a result, the proposed project would not directly or indirectly destroy a unique paleontological resource or feature with the implementation of MM GEO-1, and impacts would be less than significant with mitigation.

Operation

Impacts related to the potential to cause substantial adverse changes in the significance of a unique paleontological resource or unique geologic feature are limited to ground disturbance likely to occur only during construction. No respective operational impacts would occur.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM GEO-1 Inadvertent Discovery of Paleontological Resources During Project Construction

Prior to ground disturbance activities, construction contractors and personnel shall be required to undergo Worker Environmental Awareness Program (WEAP) training to recognize and identify paleontological resources on-site. The training shall include visual aids, a discussion of applicable laws and statutes relating to paleontological resources, types of resources that may be found within the project site, and procedures to be followed in the event such resources are encountered. The training shall be conducted by a paleontologist who meets the Society of Vertebrate Paleontology Professional Qualification Standards. Should any vertebrate remains (e.g., bones or teeth) or unusually abundant and well-preserved invertebrates or plants be unearthed, the construction contractors and personnel shall not attempt to remove them as they could be extremely fragile and therefore prone to crumbling. The relevant developer, in connection with the subject individual specific development proposal, shall include a standard inadvertent discovery clause in every project-related construction contract to inform their respective contractors of this requirement. To ensure the occurrence is properly recorded, all work in the immediate vicinity of the discovery shall be diverted at least 15 feet until a

professional paleontologist assesses the find and, if deemed appropriate, salvages it in a timely manner. All recovered fossils shall be deposited in an appropriate repository, such as the University of California Museum of Paleontology (UCMP), where they will be properly curated and made accessible for future study.

Level of Significance After Mitigation

Less than significant impact.

3.7.8 - Cumulative Impacts

The geographic scope of the cumulative geology and soils analysis is the project site and its vicinity. Adverse effects associated with many geologic resources and soils tend to be localized; therefore, an area generally within a 0.5-mile radius would be the area most affected by activities associated with the proposed project. Cumulative projects within 0.5 mile of the project site include Self Storage Ph 3 and Jamboree Housing.

Seismic-related Hazards

Although there are no active faults in the relevant area, cumulative projects, including the proposed project, have the potential to experience strong ground shaking from earthquakes. Cumulative projects would be required to adhere to the applicable provisions of the CBC, General Plan, Municipal Code, and other applicable laws and regulations as part of a comprehensive regulatory framework to reduce potential hazards associated with seismic ground shaking and ground failure. The CBC requires cumulative projects to include an analysis of seismic ground shaking, slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. The CBC further requires cumulative development to incorporate measures to reduce damage from seismic effects and expansive/unstable soils in structural design. Application of the CBC would avoid a significant cumulative impact. Furthermore, cumulative projects would be required to prepare a design-level Geotechnical Study to evaluate all potential seismic hazards. Each geotechnical study would include design requirements to further reduce potential hazards. As such, cumulative impacts would be less than significant.

Additionally, as discussed above, the proposed project would not have a cumulatively considerable contribution to this already less than significant impact because the site is relatively flat and located miles away from any potentially active faults. Furthermore, the proposed project would comply with all applicable laws and regulations, including the CBC. Therefore, the proposed project's impact, in conjunction with other cumulative projects, would be less than significant with respect to seismic-related hazards.

Soil Erosion

All cumulative projects that disturb 1 acre or more are required by law to prepare a SWPPP and implement site-specific BMPs designed to prevent construction-related erosion and reduce soil-related hazards. The related projects would also be required to obtain grading permits from the

applicable jurisdictions (i.e., City of Chico or Butte County), which requires submittal of a soils report and a geotechnical report, along with detailed grading plans for review and approval. Permit conditions would be imposed by the applicable jurisdiction (such as straw wattles and watering of the soil surface during construction) to reduce potential erosion impacts. Given the already-developed nature of much of the relevant areas, the relatively flat topography, the existing waste water utility infrastructure in the area to which cumulative developments would connect, and because they would be required to adhere to the applicable provisions of the CBC, General Plan, Municipal Code, and other applicable laws and regulations to reduce potential impacts associated with soil-related hazards, soil erosion, and sediment control, there would not be a significant cumulative impact in this regard.

Additionally, as discussed above, the proposed project would not have a cumulatively considerable contribution to this already less than significant impact related to soil erosion because the proposed project would be subject to the NPDES General Permit and associated SWPPP and BMPs. Therefore, the proposed project's impact, in conjunction with other cumulative projects, would be less than significant with respect to soil erosion.

Soil-related Hazards

Some or all other cumulative projects may have similar conditions, but they also would not contribute to a general geologic or soil cumulative effect because they would be required to obtain a grading permit and follow the soil preparation recommendations from their respective soil engineering reports. Furthermore, given the already-developed nature of much of the relevant areas, the relatively flat topography, the existing waste water utility infrastructure in the area to which cumulative developments would connect, and because they would be required to adhere to the applicable provisions of the CBC, the General Plan, Municipal Code and other applicable laws and regulations to reduce potential soil-related hazards, and would be required to adhere to applicable standards and practices that include stringent geologic and soil-related hazard reduction measures, there is no significant cumulative impact.

The proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact because the proposed project would also be required to obtain a grading permit, which requires a soil engineering report or engineering geology report and the inclusion of resulting recommendations within the grading plan, including those related to expansive soils, as necessary. In addition, the proposed project is not located in an area susceptible to landslides, but would be required to adhere to all applicable laws and regulations addressing landslides. As such, the proposed project’s impact, in conjunction with other cumulative projects, would be less than significant with respect to soil-related hazards.

Paleontological Resources and Unique Geologic Feature

The geographic scope of the cumulative unique geologic resources and paleontological resources analysis is the project site and its immediate vicinity, which includes cumulative projects Self Storage Ph 3 and Jamboree Housing. Geologic resources and paleontological resource impacts tend to be localized because the integrity of any given resource depends on what occurs only in the immediate vicinity around that resource, such as disruption of soils.

Construction activities associated with development of cumulative projects in the vicinity of the project site may have the potential to encounter undiscovered unique geologic resources and paleontological resources. However, the likelihood that unique geologic resources and paleontological resources are present in the relevant areas is relatively low, given that the Paleontological Records Search noted that no significant fossils from the Modesto Formation have been recorded in Butte County or within 60 miles of the City. Nonetheless, these cumulative projects would be required to evaluate potential site-specific impacts in connection with development proposals and mitigate any identified impacts (e.g., similar to MM GEO-1) and also be required to comply with applicable federal and State laws and regulations governing unique geologic resources and paleontological resources. In so doing, cumulative impacts would be less than significant.

With respect to the proposed project, its contribution to this already less than significant impact would not be cumulatively considerable because the potential to encounter significant paleontological resources during construction is low; and, in the event that paleontological resources are encountered during construction, implementation of MM GEO-1 would be required to ensure the proper protocols are followed to preserve any significant paleontological resources. Therefore, the proposed project's impact, in conjunction with other cumulative developments, would be less than significant with respect to unique geologic and paleontological resources.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

3.8 - Greenhouse Gas Emissions

3.8.1 - Introduction

This section describes the existing greenhouse gas (GHG) emissions setting as well as the relevant regulatory framework, and the potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on, in part, project-specific information and modeling results utilizing California Emissions Estimator Model (CalEEMod) Version 2022.1. The Greenhouse Gas Analysis is included in this Draft Environmental Impact Report (Draft EIR) as Appendix C. The following public comments were received during the Notice of Preparation (NOP) scoping period related to air quality.

- Recommendation to use the latest version of CalEEMod to perform modeling and quantification of pollutants created by construction and operational activities to estimate impacts of greenhouse gases.
- Requests for building electrification to reduce project GHG emissions, energy, and related health impacts.
- Requests for GHG impact significance to be analyzed against the net-zero threshold or zero-gas threshold, instead of the "business as usual" or Statewide per capita emissions metric.
- Requests for a demonstration of how the proposed project would be consistent with the City of Chico's Climate Action Plan Update (CAP Update) 2030 targets and the State's goal of carbon neutrality by 2045.
- Information regarding the overall carbon footprint of the proposed project.
- Incorporation of solar into the proposed project.

3.8.2 - Environmental Setting

Greenhouse Gases and Global Emission Sources

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Prominent GHGs that naturally occur in Earth's atmosphere are water vapor, carbon dioxide (CO_2), methane (CH_4), oxides of nitrogen (NO_X), and ozone. Anthropogenic (human-caused) GHG emissions include releases of these GHGs plus releases of human-made gases with high global warming potential (GWP) (ozone-depleting substances such as chlorofluorocarbons [CFCs][1] and aerosols, hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]). GWP is the potential of a gas or aerosol to trap heat in the atmosphere. The GWP of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, carbon dioxide (CO_2).

Individual GHG compounds have varying potential for contributing to global warming. For example, methane is 25 times as potent as CO_2, while sulfur hexafluoride is 22,200 times more potent than CO_2 on a molecule-per-molecule basis. To simplify reporting and analysis, methods have been set

[1] CFCs destroy stratospheric ozone. The Montreal Protocol on Substances That Deplete the Ozone Layer prohibited CFC production in 1987.

forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method for comparing GHG emissions is the GWP methodology defined in the Intergovernmental Panel on Climate Change (IPCC) reference documents.[2] The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalents (CO_2e), which compares the gas in question to that of the same mass of CO_2. (By definition, CO_2 has a GWP of 1). The GWP of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. Thus, to describe how much global warming a given type and amount of GHG may cause, the CO_2e is used. A CO_2e is the mass emissions of an individual GHG multiplied by its GWP. As such, a high GWP represents high absorption of infrared radiation and a long atmospheric lifetime compared to CO_2. One must also select a time horizon to convert GHG emissions to equivalent CO_2 emissions to account for chemical reactivity and lifetime differences among various GHG species. The standard time horizon for climate change analysis is 100 years. Generally, GHG emissions are quantified in terms of metric tons (MT) of CO_2e (MT CO_2e) emitted per year.

Units commonly used to describe the concentration of GHGs in the atmosphere are parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt), referring to the number of molecules of the GHG in a sampling of 1 million, 1 billion, or 1 trillion molecules of air. Collectively, HFCs, PFCs, and sulfur hexafluoride are referred to as high GWP gases. CO_2 is by far the largest component of worldwide CO_2e emissions, followed by methane, nitrous oxide, and high GWP gases, in order of decreasing contribution to CO_2e.

The primary human processes that release GHGs include the burning of fossil fuels for transportation, heating, and electricity generation; agricultural practices that release methane, such as livestock grazing and crop residue decomposition; and industrial processes that release smaller amounts of high GWP gases. Deforestation and land cover conversion have also been identified as contributing to global warming by reducing Earth's capacity to remove CO_2 from the air and altering Earth's albedo, or surface reflectance, thus allowing more solar radiation to be absorbed. Specifically, CO_2 emissions associated with fossil fuel combustion are the primary contributors to human-induced climate change. CO_2, methane, and nitrous oxide emissions associated with human activities are the next largest contributors to climate change.

Global Climate Change Issue

Climate change is a global problem because GHGs are global pollutants, unlike criteria air pollutants and hazardous air pollutants (also called toxic air contaminants), which are pollutants of regional and local concern. Pollutants with localized air quality effects have relatively short atmospheric lifetimes, approximately 1 day; by contrast, GHGs have long atmospheric lifetimes of several years to several thousand years. GHGs persist in the atmosphere for a long enough time to be dispersed around the globe.

Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO_2 is currently emitted into the atmosphere than is sequestered. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through photosynthesis and

[2] United Nations Intergovernmental Panel on Climate Change, United Nations. 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland.

dissolution, respectively. These are two of the most common processes of CO_2 sequestration. Of the total annual human-caused CO_2 emissions, approximately 54 percent is sequestered through ocean uptake, Northern Hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46 percent of human-caused CO_2 emissions is stored in the atmosphere.[3]

Similarly, effects of GHGs are borne globally, as opposed to the localized air quality effects of criteria air pollutants and hazardous air pollutants. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known and cannot be quantified, and no single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature or to global or local climates or microclimates.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. A cumulative discussion and analysis of project impacts on global climate change is presented in this Draft EIR because, although it is extremely unlikely that a single project could contribute significantly to climate change, cumulative emissions from many projects affect global GHG concentrations and the climate system.

Although the international, national, State, and regional communities are beginning to address GHGs and the potential effects of climate change, worldwide GHG emissions will likely continue to rise over the next decades.

Climate and Topography

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place. For a detailed discussion of existing regional and project site climate and topography, see Section 3.2, Air Quality.

Existing GHG Emissions

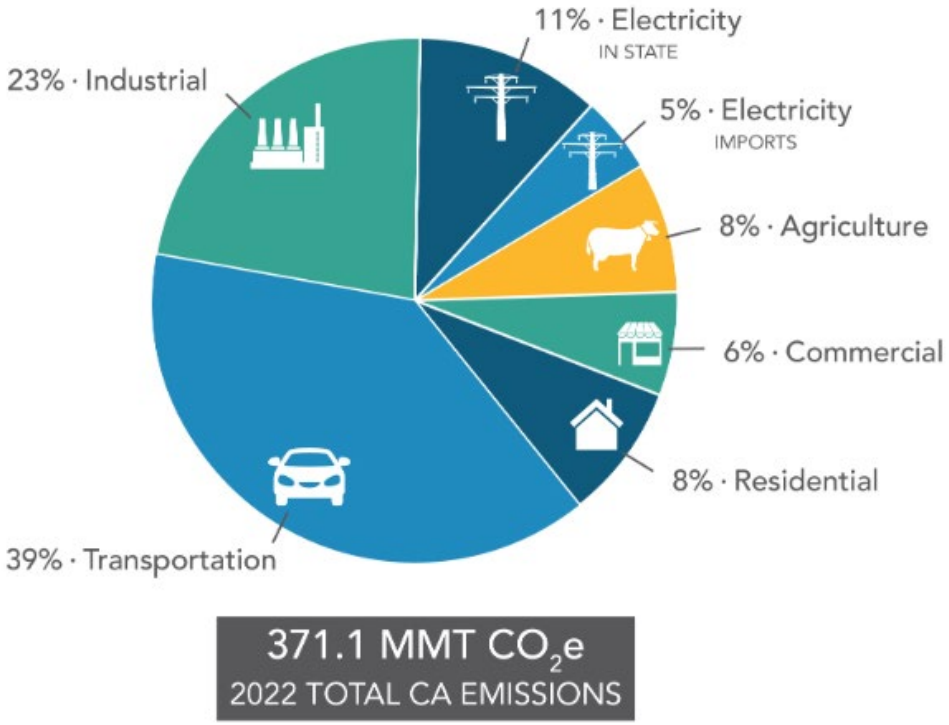
California GHG Inventory

As the second largest emitter of GHG emissions in the U.S. and the 12th to 16th largest GHG emissions emitter in the world, California contributes a large quantity (371.1 million metric tons [MMT] CO_2e in 2022) of GHG emissions to the atmosphere.[4] Emissions of CO_2 are byproducts of fossil fuel combustion and are attributable in large part to human activities associated with transportation, industry/ manufacturing, electricity and natural gas consumption, and agriculture. In California, the transportation sector is the largest emitter at 39 percent of GHG emissions, followed by industry/ manufacturing at 23 percent of GHG emissions (Figure 3.8-1).[5]

[3] Seinfeld, J.H. and S.N. Pandis. 1998. Atmospheric Chemistry and Physics from Air Pollution to Climate Change. Hoboken, NJ: John Wiley & Sons.

[4] California Air Resources Board (ARB). 2024. California Greenhouse Gas Emission Inventory – 2024 Edition. Website: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed December 10, 2024.

[5] Ibid.



Source: California Air Resources Board (ARB). 2024. California Greenhouse Gas Emission Inventory–2024 Edition. Website: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed December 10, 2024.

Figure 3.8-1: 2020 California Greenhouse Gas Emissions by Sector

Local GHG Emissions

A community-wide baseline and projected GHG emissions inventory was conducted for the City of Chico (City) and have been summarized in the City's CAP Update.[6] The 2017 Baseline Inventory for the City is shown in Table 3.8-1. The majority of the GHG in 2017 were from the transportation sector (characterized by gasoline and diesel consumption); 34 percent of the GHG came from the building energy sector (characterized by electricity and natural gas consumption); and 5 percent came from the landfill/waste sector.

Table 3.8-1: City of Chico 2017 GHG Inventory

Emissions Sector	Activity Metric	Activity Units	2017 Emissions Metric Tons (MT) CO_2e	Percentage
Residential Electricity	235,187,470	Kilowatt hours	30,757	6 %
Commercial Electricity	249,720,494	Kilowatt hours	32,658	7 %
Residential Natural Gas	12,204,431	therm	64,769	14%
Commercial Natural Gas	6,015,786	therm	31,926	7%

[6] City of Chico. 2021. Climate Action Plan Update. Website: https://chico.ca.us/documents/Government/Boards--Commissions/Climate-Action-Commission/Climate-Action-Plan-Update/chico-cap-update_final-draft-complete.pdf. Accessed December 10, 2024.

Emissions Sector	Activity Metric	Activity Units	2017 Emissions Metric Tons (MT) CO_2e	Percentage
Gasoline	20,597,450	gallons	181,031	39%
Diesel	9,965,177	gallons	101,854	22%
Landfilled Waste	82,440	tons	23,372	5%
Total Emissions	–	–	466,366	100%
Emissions per Person	–	–	5.07	Per Capita

Notes:
Emission factors and complete inventory are included in Table 1 of the Climate Action Plan Update.
Source: City of Chico. 2021.

In order to clearly demonstrate how the City of Chico's emissions look in the future, two forecasts were developed–a Business as Usual (BAU) forecast and an adjusted forecast. The BAU forecast shows what the City's emissions would look like if population and job growth were the only drivers for GHG generating activities, essentially assuming that per capita emissions remain constant. The adjusted forecast adjusts the BAU forecast to account for State-level legislation and policies that are expected to reduce emissions for all jurisdictions in California.

The State legislation and policies included in the adjusted forecast are the Advanced Clean Cars Program, Title 24 Building Energy Efficiency Standards, and California Renewable Portfolio Standard (RPS).[7] For example, electricity service providers must procure electricity from 50 percent renewable resources by 2026, 60 percent by 2030, and 100 percent by 2045, leading to significant Statewide decreases in electricity emissions.

The adjusted forecast provides a more accurate picture of future emissions growth and the responsibility of the City and community once State regulations to reduce GHG emissions have been implemented. The GHG forecast uses benchmark years of 2020, 2025, 2030, 2040, and 2045, consistent with currently codified GHG reduction targets or executive orders which are expected to be codified in future.

The forecast years align with the following targets:

- 2020 (Assembly Bill [AB] 32)
- 2025 (interim target year)
- 2030 (Senate Bill [SB] 32 and General Plan horizon year)
- 2040 (interim target year)
- 2045 (EO B-55-18)

[7] City of Chico. 2021. Climate Action Plan Update. Website: https://chico.ca.us/sites/main/files/file-attachments/chico-cap-update_final-draft-complete.pdf?1655413766. Accessed December 11, 2024.

The 2030 target is required for consistency with SB 32 and the Chico 2030 General Plan, while the remainder of the targets identify a clear path and milestones of progress toward the long-term State reduction goals.

These adjusted GHG emissions projections for the City of Chico are shown in Table 3.8-2.

Table 3.8-2: City of Chico Adjusted Forecast Summary

Variable	2017	2020	2025	2030	2040	2045
Population	92,022	111,892	107,593	107,712	113,303	116,420
Jobs	32,429	39,061	37,124	36,251	38,859	40,162
(MT CO_2e)						
Residential Electricity	30,757	33,722	29,829	21,318	7,284	0
Commercial Electricity	32,658	36,285	31,553	22,163	7,760	0
Residential Natural Gas	64,769	78,285	75,471	75,549	79,209	81,250
Commercial Natural Gas	31,926	38,248	36,474	35,675	38,063	39,256
Gasoline Sales	181,031	167,666	145,733	129,209	118,131	119,128
Diesel Sales	101,854	100,435	91,722	84,367	80,902	82,473
Waste	23,372	28,349	27,178	27,036	28,576	29,406
Total Emissions	**466,366**	**482,990**	**437,961**	**395,317**	**359,925**	**351,512**
Emissions Per Capita	5.07	4.32	4.07	3.67	3.18	3.02

Notes:
MT CO_2e = metric tons of carbon dioxide equivalents
Source: City of Chico. 2021.

Existing GHG Emissions from the Project Site

GHG emissions from the project site are from the limited existing activities, which consist solely of indoor recreational vehicle (RV) storage; this use involves nominal building-related energy use and vehicle trips associated with this storage facility. Therefore, the on-site indoor RV storage presents nominal existing emission sources on the project site and, for purposes of a conservative analysis, are not netted out in this evaluation.

Climate Change Trends and Effects

CO_2 accounts for more than 75 percent of all anthropogenic GHG emissions, the atmospheric residence time of CO_2 is decades to centuries, and global atmospheric concentrations of CO_2 continue to increase at a faster rate than ever previously recorded. Thus, the warming impacts of CO_2 will persist for hundreds of years after mitigation is implemented to reduce GHG concentrations.

Substantially higher temperatures, more extreme wildfires, and rising sea levels are just some of the direct effects experienced in California.[8,9] As reported by the California Natural Resources Agency in 2009, despite annual variations in weather patterns, California has seen a trend of increased average temperatures, more extreme hot days, fewer cold nights, longer growing seasons, less winter snow, and earlier snowmelt and rainwater runoff. Statewide average temperatures increased by about 1.7 degrees Fahrenheit (°F) from 1895 to 2011, and a larger proportion of total precipitation is falling as rain instead of snow.[10] Sea level rose by as much as 7 inches along the California coast over the last century, leading to increased erosion and adding pressure to the State's infrastructure, water supplies, and natural resources.

These observed trends in California's climate are projected to continue in the future. Research indicates that California will experience overall hotter and drier conditions with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea level rise. The frequency, intensity, and duration of extreme weather events such as heat waves, wildfires, droughts, and floods will also change.[11] In addition, increased air pollution and spread of insects potentially carrying infectious diseases will also occur as the climate-associated temperature and associated species clines shift in latitude.

The following is a summary of climate change factors and predicted trends specific to California.

In California, climate change may result in consequences such as the following.[12,13]

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of Southern California are estimated to increase by approximately 30 percent toward the end of the twenty-first century because more winter

[8] California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed December 11, 2024.

[9] California Energy Commission (CEC). 2012. Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California. Website: https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/united-states/west-coast-amp-hawaix27i/california---statewide/CCCC.--2012.--Vulner--Adapt-to-CC-risks.pdf. Accessed December 11, 2024.

[10] California Energy Commission (CEC). 2006. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004. Draft Final Report. CEC-600-2006-013-D. Website: https://cetesb.sp.gov.br/inventario-gee-sp/wp-content/uploads/sites/34/2014/04/161.pdf. Accessed October 9, 2024.

[11] California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008. Website: http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed December 11, 2024.

[12] California Climate Change Center. (CCCC). 2006. Our Changing Climate, Assessing the Risks to California: A Summary Report from the California Climate Change Center. July 2006. CEC-500-2006-077. Website: https://www.engr.scu.edu/~emaurer/papers/CEC-500-2006-077.pdf. Accessed December 11, 2024

[13] Moser et al. 2009. Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. Website: http://www.susannemoser.com/documents/CEC-500-2008-071_Moseretal_FutureisNow.pdf. Accessed December 11, 2024.

rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more Northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.

- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about 7 inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase in temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

3.8.3 - Regulatory Framework

Laws and regulations relevant to the analysis are discussed below.

International

International organizations such as the ones discussed below have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

Intergovernmental Panel on Climate Change

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention)

On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and

adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol

In 1988, the United Nations established the IPCC to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Climate Change Action Plan currently consists of more than 50 voluntary programs for member nations to adopt. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It was estimated that if the commitments outlined in the Kyoto Protocol were met, global GHG emissions could be reduced an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

Paris Climate Change Agreement

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review. The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st Session of the UNFCCC Conference of the Parties, or "COP 21." Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees.
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them.
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review.
- Commit all countries to submit new NDCs every 5 years, with the clear expectation that they will "represent a progression" beyond previous ones.
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too.

- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025.
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation."
- Require parties engaging in international emissions trading to avoid "double counting."
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.[10]

On June 1, 2017, former President Trump announced the decision for the United States to withdraw from the Paris Agreement.[11] However, on January 20, 2021, President Biden signed the instrument to bring the United States back into the Paris Agreement that same day.[12] California remains committed to addressing climate change through programs aimed to reduce GHGs.[13]

Federal

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970 and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground level ozone, CO, sulfur oxides, nitrogen oxides, and lead. The United States Environmental Protection Agency (EPA) calls these pollutants criteria air pollutants, because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards.[14] The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health.

[14] United States Environmental Protection Agency (EPA). 2023. Clean Air Act Requirements and History. Website: https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history. Accessed December 11, 2024.

U.S. Supreme Court GHG Endangerment Ruling

In *Massachusetts et al. v. EPA* (Supreme Court Case 05-1120, 2006) the U.S. Supreme Court held that EPA has authority to regulate GHG emissions from motor vehicles as air pollutants under the CAA. The Court concluded that the EPA must decide whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare—or provide a reasonable explanation why it cannot or will not make that decision (i.e., the science being too uncertain to make a reasoned decision). On or about December 15, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations; and
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHG emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industries or other entities. However, the endangerment finding triggered EPA's duty under CAA Section 202(a) to promulgate emission standards for new motor vehicles, which are discussed below.

Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light-duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years (MYs) 2012–2016. They required these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements.

The second phase established national standards for light-duty vehicles for model years 2017 through 2025. Under Phase 2 regulations, finalized in 2012 rulemaking, the manufacturers agreed to reduce GHG emissions from their MY 2025 fleet by about 50 percent compared to MY 2010. The final standards were projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in MY 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements. As part of this rulemaking, the EPA made a regulatory commitment to conduct a Midterm Evaluation (MTE) of the standards for MYs 2022–2025, which involved examining a wide range of factors, such as developments in powertrain technology, vehicle electrification, light-weighting and vehicle safety impacts, the penetration of fuel-efficient technologies in the

marketplace, consumer acceptance of fuel-efficient technologies, trends in fuel prices and the vehicle fleet, and employment impacts. In 2018, the MTE Final Determination found that the MY 2022–2025 GHG standards were not appropriate in light of the record before EPA and, therefore, should be revised. Accordingly, the Trump administration revised the MY 2022–2025 standards, implementing the Safer, Affordable, Fuel-Efficient (SAFE) Vehicles Rule, wherein the National Highway Traffic Safety Administration (NHTSA) asserted that Energy Policy and Conservation Act (EPCA) preempts State and local GHG standards because they are "related to" fuel economy standards. Further, the EPA withdrew the CAA preemption waiver it had granted to California in January 2013 as it relates to the State's GHG and Zero-Emission Vehicle (ZEV) programs for MYs 2017–2025. The agencies finalized the second part of the SAFE Vehicles Rule in March 2020. Further, in December 2021, NHTSA repealed the SAFE Vehicles Rule, Part One, regarding EPCA's preemption of State GHG standards (86 Federal Register 74236). In March 2022, the EPA reinstated California's waiver authority under the CAA to implement its own GHG emission.

In 2021, the EPA finalized new GHG emissions standards for passenger cars and light trucks for MYs 2023 through 2026. These standards, which are the strongest vehicle emissions standards ever established for the light-duty vehicle sector, set the light-duty vehicle GHG program on track to provide a strong launch point for the EPA's next phase of standards for MY 2027 and beyond. The EPA is planning to initiate a separate rulemaking to establish multi-pollutant emission standards under the CAA for MY 2027 and later that will speed the transition of the light-duty vehicle fleet toward a zero-emissions future, consistent with President Biden's Executive Order 14037, Strengthening American Leadership in Clean Cars and Trucks, which set a nonbinding target of making 50 percent of passenger cars and light-duty trucks ZEVs by 2030.

National Regulations for Greenhouse Gas Emissions from Commercial Trucks and Buses

The EPA and NHTSA issued rules for the first national standards to reduce GHG emissions and improve fuel efficiency of medium- and heavy-duty trucks and buses. The Phase 1 Greenhouse Gas Rule, issued in 2011, set GHG emissions and fuel economy standards for medium- and heavy-duty trucks manufactured in MYs 2014–2018.

In October 2016, the EPA and the NHTSA jointly finalized Phase 2 standards for medium- and heavy-duty vehicles through MY 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change while bolstering energy security and spurring manufacturing innovation.[15]

In 2021, the EPA announced plans to reduce GHG emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings over the next 3 years. The first rulemaking of this Clean Trucks Plan was the recently finalized rule, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicles Standards, signed on December 20, 2022. Two additional

[15] United States Environmental Protection Agency (EPA). 2016. Final Rule for Phase 2 Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles | US EPA, Website: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-phase-2-greenhouse-gas-emissions-standards, Accessed December 11, 2024.

rulemakings, the Phase 3 GHG proposal for heavy-duty vehicles and the multi-pollutant emissions standards for light-duty and medium-duty vehicles, have been proposed.[16]

California Waiver

The State of California has received a waiver from the EPA to have separate, stricter Corporate Average Fuel Economy Standards. California is the only state allowed to set its own air emissions standards for motor vehicles. California was granted an exception under the CAA because the State had already implemented standards in 1966 to address its critical smog problem and had established the California Air Resources Board (ARB) to oversee them. The CAA states that the EPA shall grant a waiver if California's standards are necessary to meet compelling circumstances and are at least as stringent as federal standards. Other states may choose to adopt California's vehicle emissions standards without EPA approval. Seventeen states and the District of Columbia, making up about 40 percent of U.S. auto sales, currently follow at least some of California's vehicle emissions standards.

United States Consolidated Appropriations Act (Mandatory Greenhouse Gas Reporting)

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 MT or more per year of GHG emissions are required to submit annual reports to the EPA. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to EPA in 2011.

U.S. Clean Air Act Permitting Programs (New Greenhouse Gas Source Review)

The EPA issued a final rule on May 13, 2010, which establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Code of Federal Regulations, the EPA stated:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps

[16] United States Environmental Protection Agency (EPA). Clean Trucks Plan. Website: https://www.epa.gov/regulations-emissions-vehicles-and-engines/clean-trucks-plan. Accessed December 11, 2024.

addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016. The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Cap-and-Trade

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or flexibility is provided on how the emitter can comply. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade. The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008. The Western Climate Initiative partner jurisdictions developed a comprehensive initiative to reduce regional GHG emissions to percent below 2005 levels by 2020.[15] The partners are California, British Columbia, Manitoba, Ontario, and Québec. Currently only California and Québec are participating in the cap-and-trade program.[16]

State

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes, such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of these legislative efforts.

Assembly Bill 1493 Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the United States District Court for the District of Columbia in 2011.[17] The standards were to be phased in during the 2009 through 2016 model years.[18]

The second phase of the implementation for the Pavley Bill was incorporated into Amendments to the Low-Emission Vehicle (LEV) Program referred to as LEV III or the Advanced Clean Cars program.

[17] California Air Resources Board (ARB). 2013. Clean Car Standards—Pavley, Assembly Bill 1493. Website: http://www.arb.ca.gov/cc/ccms/ccms.htm. Accessed December 11, 2024.

[18] California Air Resources Board (ARB). Advanced Clean Cars Summary. Website: https://ww2.arb.ca.gov/sites/default/files/2019-12/acc%20summary-final_ac.pdf. Accessed December 11, 2024.

The Advanced Clean Car Program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MYs 2017 through 2025. The regulation is anticipated to reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline- and diesel-powered cars and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (HEVs), and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.[19]

Advanced Clean Cars II was adopted in November 2022. The Advanced Clean Cars II regulations will rapidly scale down light-duty passenger car, pickup truck, and SUV emissions starting with MY 2026 through 2035. The regulations are two-pronged. First, they amend the ZEV Regulation to require an increasing number of ZEVs and rely on currently available advanced vehicle technologies, including battery electric, hydrogen fuel cell electric, and plug-in HEVs, to meet air quality and climate change emissions standards. These amendments support Governor Newsom's 2020 Executive Order N-79-20 that requires all new passenger vehicles sold in California to be zero-emissions by 2035. Second, the LEV regulations were amended to include increasingly stringent standards for gasoline cars and heavier passenger trucks to continue to reduce smog-forming emissions.

In October 2023, the ARB launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe GHG emission standard and limited revisions to the LEV and ZEV regulations.

These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks, and SUVs and require an increased number of ZEVs to meet air quality and climate change emissions goals.

Assembly Bill 32

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. GHGs, as defined under AB 32, include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs.

The ARB is the State agency charged with monitoring and regulating sources of GHGs. The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007.[20] Therefore, to meet the State's target, emissions generated in California in 2020 were required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a BAU scenario were estimated to be 596 MMT CO_2e, which does not account for reductions from AB 32 regulations.[21] At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, the ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. Under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990

[19] California Air Resources Board (ARB). 2011. Status of Scoping Plan Recommended Measures. Website: https://calcarbondash.org/cc/scopingplan/sp_measures_implementation_timeline.pdf. Accessed December 11, 2024.
[20] California Air Resources Board (ARB). 2007. Staff Report. California 1990 Greenhouse Gas Level and 2020 Emissions Limit. November 16, 2007.
[21] California Air Resources Board (ARB). 2008 (includes edits made in 2009). Climate Change Scoping Plan.

levels.[22] On July 11, 2018, ARB announced that the State has met its target of reducing GHG emissions to 1990 levels.[23]

California Air Resources Board Scoping Plan

The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32.[24] The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target; each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target included energy efficiency programs, renewable energy expansion, Cap-and-Trade, establishing targets for transportation-related GHGs, and a high GWP fee program.

The ARB approved the First Update to the Scoping Plan in 2014. The First Update builds upon the Initial Scoping Plan with new strategies and recommendations.

Senate Bill 32 and the 2017 Climate Change Scoping Plan Update

The Governor signed SB 32 in September 2016, giving the ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the State [air resources] board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017.

The main elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
   - Achieve 50 percent Renewables Portfolio Standard by 2030.
   - Doubling of energy efficiency savings by 2030.

2. Low Carbon Fuel Standard
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million ZEVs on the roads.

[22] California Air Resources Board (ARB). 2014 Edition BAU Emissions Projection. Website: https://ww2.arb.ca.gov/ghg-bau. Accessed December 11, 2024.
[23] California Air Resources Board. 2018. Climate Pollutants Fall Below 1990 Levels for First Time. Website: https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time. Accessed December 11, 2024.
[24] California Air Resources Board (ARB). 2008. (includes edits made in 2009) Climate Change Scoping Plan, a framework for change. Website: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed December 11, 2024.

- Increase ZEV buses, delivery and other trucks. 4. Sustainable Freight Action Plan.
- Improve freight system efficiency.
- Maximize use of near ZEVs and equipment powered by renewable energy.
- Deploy over 100,000 zero-emission trucks and equipment by 2030. 5. Short-Lived Climate Pollutant Reduction Strategy.
- Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
- Reduce emissions of black carbon 50 percent below 2013 levels by 2030. 6. SB 375 Sustainable Communities Strategies.
- Increased stringency of 2035 targets.

4. Post-2020 Cap-and-Trade Program
   - Declining capacities, continued linkage with Québec, and linkage to Ontario, Canada.
   - The ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In fall 2016, the ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

5. 20 percent reduction in GHG emissions from the refinery sector.
6. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 ARB Scoping Plan

The 2022 Scoping Plan[25] establishes a scenario by which the State may achieve carbon neutrality by 2045 or earlier, and it outlines a technologically feasible, cost-effective, and equity-focused path for achieving this climate target. The 2022 Scoping Plan addresses the latest climate-related legislation and direction from current Governor Gavin Newsom, who, by his signing of AB 1279, required the State to reduce Statewide anthropogenic GHG emissions to at least 85 percent below 1990 levels by 2045 and to maintain net negative GHG emissions thereafter. The 2022 Scoping Plan relies on the aggressive reduction of fossil fuels in all Statewide sectors and accelerating existing carbon reduction programs. Aspects of the 2022 Scoping Plan's scenario include:

- Rapidly moving to zero-emission transportation by electrifying cars, buses, trains, and trucks.
- Phasing out the use of fossil gas used for heating homes and buildings.
- Clamping down on chemicals, refrigerants, and other high GWP gases.
- Providing communities with sustainable options for walking, biking, and public transit to reduce reliance on cars.

[25] California Air Resources Board. 2022 Scoping Plan. Website: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents. Accessed December15, 2024.

- Continuing to develop solar arrays, wind turbine capacity, and other resources that provide clean, renewable energy.
- Scale up options such as renewable hydrogen and biomethane for end uses that are hard to electrify.

The ARB estimates that successfully achieving the outcomes called for by the 2022 Scoping Plan will reduce demand for liquid petroleum by 94 percent and total fossil fuel by 86 percent in 2045, relative to 2022. The 2022 Scoping Plan also emphasizes the role of natural and working lands and carbon capturing technologies to address residual emissions and achieve net negative emissions.

Senate Bill 375—the Sustainable Communities and Climate Protection Act of 2008

SB 375 was signed into law in 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, emitting over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires Metropolitan Planning Organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Senate Bill 1368—Emission Performance Standards

In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements of longer than 5 years for energy from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities, of 1,100 pounds CO_2 per megawatt hour (MWh).

Senate Bill 1078—Renewable Electricity Standards

On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established an RPS target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB approved the Renewable Electricity Standard on September 23, 2010, by Resolution 10-23.

Senate Bill 350—Clean Energy and Pollution Reduction Act of 2015

The legislature approved, and the Governor signed, SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies toward a regional

electricity grid, and improved infrastructure for electric vehicle (EV) charging stations. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024 and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the CPUC, the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator to develop more regional electrified transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.[26]

Senate Bill 100—The 100 Percent Clean Energy Act of 2018

The legislation directs the CPUC, CEC, and the ARB to plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. This Act amends Sections 399.11, 399.15, and 399.30 of, and adds Section 454.53 to, the Public Utilities Code relating to energy.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through executive orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a midterm target. Because this is an Executive Order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07—Low Carbon Fuel Standard

The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandated that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the CEC,

[26] California Legislative Information (California Leginfo). 2015. Senate Bill 350 Clean Energy and Pollution Reduction Act of 2015. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350. Accessed December 11, 2024.

ARB, University of California, and other agencies to develop and propose protocols for measuring the "lifecycle carbon intensity" of transportation fuels. The ARB adopted the LCFS in 2009.

The LCFS was subject to legal challenge in 2011. Ultimately, in 2013, the Fifth District Court of Appeal (California) ruled that the ARB failed to comply with California Environmental Quality Act (CEQA) and the Administrative Procedure Act when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal directed that Resolution 09-31 and two executive orders of the ARB approving LCFS regulations promulgated to reduce GHG emissions be set aside. However, the Court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while the ARB complied with the procedural requirements it failed to satisfy.

To address the Court ruling, the ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Final Rulemaking Package adopting the regulation was filed with the Office of Administrative Law (OAL) in 2015. The OAL approved the regulation the same year.[27]

Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy[28] was adopted, which is the ". . . first Statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an Executive Order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's Executive Order aligned California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris in late 2015. The Executive Order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MT CO_2e. The Executive Order also requires the State's climate adaptation plan to be updated every 3 years and requires the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Executive Order is

[27] California Air Resources Board (ARB). 2015. Low Carbon Fuel Standard Regulation. Website: https://www.arb.ca.gov/regact/2015/lcfs2015/lcfs2015.htm. Accessed December 11, 2024.
[28] California Natural Resources Agency. 2009. 2009 California Climate Adaptation Strategy.

not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to mandate compliance with post-2020 targets is in process in the State Legislature.

Executive Order N-79-20 and Advanced Clean Cars II

Executive Order N-79-20 directs the State to require that, by 2035, all new cars and passenger trucks sold in California be ZEVs.[29] The Advanced Clean Cars II (ACC II) rule codifies the light-duty vehicle goals set out in California Governor Newsom's Executive Order N-79-20 and establishes a year-by-year roadmap so that, by 2035, 100 percent of new cars and light trucks sold in California will be "Zero-Emission Vehicles"—defined as zero tailpipe emission vehicles and plug-in hybrid electric vehicles (PHEVs). The regulation accelerates requirements that automakers deliver an increasing number of zero-emission light-duty vehicles each year beginning in model year 2026. Sales of new ZEVs and PHEVs will start with 35 percent that year, build to 68 percent in 2030, and reach 100 percent in 2035.

Small Off-road Engine Regulations

California Executive Order N-79-20 also sets a goal to transition off-road vehicles and equipment operations to 100 percent zero-emission by 2035 where feasible and is the impetus for the Small Off-Road Engine Regulations. The ARB aims to achieve 100 percent zero-emissions from small off-road engine (SORE) entities by 2035. However, total smog-forming emissions from SORE already exceed emissions from light-duty passenger cars in California. A single lawn mower used for one hour emits as many pollutants as driving a new light-duty passenger car over 300 miles, and a leaf blower used for one hour emits as many pollutants as driving the same vehicle over 1100 miles. The 2021 SORE amendments effectively ban the sale of carbon-emitting landscaping equipment to be sold in model year 2024.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

California Code of Regulations Title 13: Motor Vehicles

California Code of Regulations, Title 13: Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.[30] This measure seeks to reduce public exposure to diesel particulate matter (DPM) and other air contaminants by establishing idling restrictions, emission standards, and other requirements for heavy-duty diesel engines and alternative idle-reduction technologies to limit the idling of diesel-fueled commercial motor vehicles. Any person that owns, operates, or causes to operate any diesel-fueled commercial motor vehicle must not allow a vehicle to idle for more than 5 consecutive minutes at any location or operate a diesel-fueled auxiliary power system for greater than 5 minutes at any location when within 100 feet of a restricted area.

[29] Executive Department State of California. 2020. Executive Order N-79-20.

[30] California Air Resources Board (ARB). Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling. Website: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling/about. Accessed December 11, 2024.

California Code of Regulations, Title 13: Division 3, Chapter 9, Article 4.8, Section 2449: General Requirements for In-Use Off-Road Diesel-Fueled Fleets. This measure regulates NO_X, DPM, and other criteria pollutant emissions from in-use, off-road diesel-fueled vehicles. This measure also requires each fleet to meet fleet average requirements or demonstrate that it has met "best available control technology" requirements. Also, this measure requires medium and large fleets to have a written idling policy available to operators of the vehicles informing them that idling is limited to 5 consecutive minutes or less.

Title 20 Appliance Efficiency Regulations

California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

Title 24 Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficient technologies and methods. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020. One of the notable changes in the 2019 Title 24 Standards includes the solar photovoltaic systems requirement for new low-rise residential homes. The current version of Title 24 adopted by the CEC went into effect on January 1, 2023.[31]

Title 24 California Green Building Standards Code

California Code of Regulations Title 24 Part 11 code is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the current version of the 2022 California Green Building Code Standards Code (CALGreen) that became effective January 1, 2023.[32] Local jurisdictions are permitted to adopt more stringent requirements as State law provides methods for local enhancements. State building codes provide the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The Bill required local agencies to adopt a local landscape ordinance at least as

[31] California Energy Commission (CEC). 2023. 2022 Building Energy Efficiency Standards. Website: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency. Accessed December 11, 2024.

[32] State of California. 2022. California Green Building Standards Code (CALGreen).

effective in conserving water as the Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with the 2020 mandate (SBX-7-7) are expected. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed the California Department of Water Resources to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance in 2015, which became effective the same year. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems.
- Incentives for graywater usage.
- Improvements in on-site stormwater capture.
- Limits on the portion of landscapes that can be planted with high water use plants.
- Reporting requirements for local agencies.

California Supreme Court GHG Ruling

In a 2015 ruling, the California Supreme Court, in *Center for Biological Diversity v. California Department of Fish and Wildlife* on the Newhall Ranch project, concluded that whether the project was consistent with meeting Statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25-27 of the ruling to address this issue, as summarized below:

Specifically, the Court advised:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with Statewide goals (page 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities" (page 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as CAPs or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (page 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts.

The California Supreme Court was concerned that new development may need to do more than existing development to reduce GHGs to demonstrate that it was doing its fair share of reductions.

Therefore, for purposes of this analysis and as discussed further below, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the Newhall Ranch opinion, the GHG impacts would be considered significant if the proposed project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the Air District GHG Reduction Threshold; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHGs. As further discussed under Section 3.8.4, Impacts and Mitigation Measures, these thresholds are consistent with the Appendix G Environmental Checklist questions from the CEQA Guidelines for GHG emissions.

Senate Bill 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The Code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010, for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process, and the amendments became effective on March 18, 2010. The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable; however, it does not answer the question of when emissions are cumulatively considerable. Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to Section 15183.5(b). In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include GHG questions. CEQA emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

Regional

Butte County Air Quality Management District

The Butte County Air Quality Management District (BCAQMD) is the regional agency responsible for the regulation and enforcement of federal, State, and local air pollution control regulations in the City of Chico. The BCAQMD has not adopted a post-2020 GHG emissions threshold to evaluate a project's GHG emissions.

As such, in order to determine whether the proposed project's GHG emissions would have a significant effect on the environment, this Draft EIR analyzes consistency with GHG reduction actions identified in the City's 2021 CAP Update.[33] This approach is discussed in more detail below, under Local Regulations–City of Chico CAP and CAP Update.

[33] City of Chico. 2021. Climate Action Plan Update. Website: https://chico.ca.us/documents/Government/Boards--

Butte County Association of Governments

The Butte County Association of Governments (BCAG) region includes all local governments within Butte County (County). BCAG is responsible for developing federal and State transportation plans and programs that secure funding for transportation improvements in the County. BCAG adopted the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in December 2020. The 2020 RTP/SCS focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in the development of the BCAG region through the horizon year 2040. It forecasts that the BCAG region will meet its GHG per capita reduction targets of 6 percent by 2020 and 7 percent by 2035, resulting in a 14 percent reduction for 2020 and an 8 percent reduction for 2035. BCAG is adopted its 2024 RTP/SCS December of 2024.[34]

Local

City of Chico Climate Action Plan and Climate Action Plan Update

In 2011, the City adopted its CAP to reduce GHG emissions within the City in order to meet the State's goal, as recommended in the AB 32 Scoping Plan, of reducing GHG emissions 25 percent below the 2005 baseline levels by 2020. In April 2020 (adopted in 2021), the City finalized an update to their GHG inventory and forecast from 1990 to 2045 in order to support the City's CAP Update.[35] The City has reduced overall GHG emissions by 27 percent despite a 27 percent increase in population. Major reductions were seen in the energy and transportation sectors. Reductions in the transportation sector were driven primarily by reductions in diesel and gasoline consumption, whereas reductions in the energy sector were driven entirely by a reduction in emission factors, despite little change in actual electricity usage. Because of the significant population increase between 2005 and 2017, per capita emissions have seen an overall 42 percent decrease from 8.8 MT CO_2e per person in 2005 to 5.07 MT CO_2e per person in 2017. Mass emissions also decreased by 27 percent between 2005 and 2017 exceeding the 2020 CAP reduction target of 25 percent below 2005 levels by 2020.

As part of the effort to ensure a sustainable future, the City adopted a CAP Update in 2021, including a GHG emissions inventory and forecast. The CAP Update is intended to guide the City toward reducing GHG emissions consistent with the State goal to reduce GHG emissions 40 percent below 1990 levels by 2030, established by SB 32, and will make substantial progress toward meeting the State's long-term goal of carbon neutrality by 2045, established by EO B-55-18. As discussed above, under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with construction and operation. Per CEQA Guidelines Section 15183.5(b), a qualified GHG Reduction Plan must:

- Quantify existing and projected GHG emissions within the plan area.

Commissions/Climate-Action-Commission/Climate-Action-Plan-Update/chico-cap-update_final-draft-complete.pdf. Accessed December 11, 2024.

[34] County of Butte. 2020. 2020 Regional Transportation Plan/Sustainable Community Strategy. December 10. Website: http://www.bcag.org/documents/planning/RTP%20SCS/2020%20RTP%20SCS/Document%20Chapters/2020%20RTP%20SCS%20Document-ALL%20REVISED.pdf. Accessed December 11, 2024.

[35] City of Chico. 2021. Climate Action Plan Update. Website: https://chico.ca.us/documents/Government/Boards--Commissions/Climate-Action-Commission/Climate-Action-Plan-Update/chico-cap-update_final-draft-complete. Accessed December 11, 2024.

- Establish a reduction target based on SB 32.
- Identify and analyze sector specific GHG emissions from Plan activities.
- Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve a specified reduction target.
- Establish a tool to monitor progress and amend if necessary.
- Adopt in a public process following environmental review.

The 2021 CAP Update fulfills these requirements and is therefore a "qualified" GHG Reduction Plan per CEQA. The CAP Update adopts a GHG emissions target for 2030, and a long-term GHG emissions goal for 2045. The City's targets are to reduce mass emissions 45 percent below 1990 levels by 2030 and to achieve carbon neutrality by 2045. The adopted 2030 target therefore exceeds SB 32 by 5 percent and aligns with the State's long-term GHG reduction goal for 2045. These goals result in quantified emissions targets of 2.76 MT CO_2e per capita per year for year 2030 and 0 MT CO_2e per capita per year for 2045. The City's CAP Update uses a per capita metric to allow for population growth in the City consistent with 2019 "medium scenario" population estimates from BCAG (which includes population re-distribution estimates resulting from the Camp Fire in 2018). In absolute terms, the 2030 target of 2.76 MT CO_2e per person is based on citywide GHG emissions of 297,386 MT CO_2e.

To calculate the City's targets, the CAP Update accounts for Statewide legislation and policies that are anticipated to reduce average emissions by approximately 1.4 MT CO_2e per person by 2030 and would continue through 2045 to provide an estimated total reduction of 2.01 MT CO_2e per person. These State legislation efforts and policies consist of Title 24 Energy Efficiency Standards, the Advanced Clean Cars Program, and the RPS program described above. Most emissions reductions forecast from Statewide programs would come from the Advanced Clean Cars and ZEV programs.

Relative to the existing emissions rate of approximately 5.07 MT CO_2e per person, the identified Statewide efforts leave 0.91 MT CO_2e per person for the City to eliminate by 2030 (5.07 - 1.4 - 0.91 = 2.76). The City's CAP Update includes measures to reduce this amount of GHG emissions by including measures related to energy, transportation, waste, sequestration, and education/outreach. Implementation of the most critical measures has already begun, and the efforts will continue and expand over the next several years, with bi-annual status updates, GHG Inventory monitoring, and a major check-in planned for 2025.

The CAP Update establishes a robust framework for helping the City achieve its 2030 targets while accommodating growth; however, federal, State, and local efforts contemplated 15 to 25 years into the future are too speculative to support definitive statements. Continuing current efforts and meeting the City's 2030 goal will, nonetheless, represent important progress toward achieving its goal of carbon neutrality by 2045.

City of Chico General Plan

The City of Chico 2030 General Plan[36] includes various goals, policies, and actions related to reducing GHGs (both directly and indirectly). Relevant goals, policies, and actions for this analysis include the following:

Sustainability Element

Goal SUS-4 **Promote green development.**

Policy SUS-4.2 (Water Efficient Landscaping): Promote drought-tolerant landscaping.

Policy SUS-4.3 **(Green Development Practices)**: Promote green development practices in private projects.

Action SUS-4.3.1 **(Green Development Checklist):** Include a Green Development Checklist and supporting materials with City planning and building applications and permits highlighting ways to incorporate green development principles into project design.

Action SUS-4.3.3 **(Reduce Heat Gain)**: Establish standards for new nonresidential structures, such as reflective roofing or light-colored pavement to reduce the heat gain associated with traditional urban development.

Goal SUS-5 **Increase energy efficiency and reduce nonrenewable energy and resource consumption Citywide.**

Policy SUS-5.2 **(Energy-Efficient Design)**: Support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.

Action SUS-5.2.1 **(Integration of Energy Efficiency Technology)**: Utilize City incentives identified in Action LU-2.3.1 to encourage the integration of energy efficiency measures and renewable energy devices, in addition to those required by the State, during early project review.

Goal SUS-6 **Reduce the level of greenhouse gas emissions citywide.**

Policy SUS-6.3 **(Greenhouse Gas Emissions and CEQA)**: Analyze and mitigate potentially significant increases in greenhouse gas emissions during project review, pursuant to CEQA.

Policy SUS-6.4 **(Community Trees)**: Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.

[36] City of Chico. 2017. 2030 General Plan. March.

Circulation Element

Goal CIRC-1 **Provide a comprehensive multimodal circulation system that serves the buildout of the Land Use Diagram and provides for the safe and effective movement of people and goods.**

Policy CIRC-1.2 **(Project-level Circulation Improvements)**: Require new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian, and bicycle facilities.

Policy CIRC-1.5 **(Vehicle Miles Traveled Analysis)**: Consistent with State law, implement Vehicle Miles Traveled (VMT) assessments as part of the environmental review process under CEQA.

Action CIRC-1.5.1 **(VMT CEQA Analysis)**: For projects that require a full traffic analysis as part of the CEQA review process, perform a VMT analysis consistent with the California Office of Planning and Research (OPR) CEQA Guidelines.

Goal CIRC-2 **Enhance and maintain mobility with a complete streets network for all modes of travel.**

Policy CIRC-2.1 **(Complete Streets Standards)**: Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and GHG emissions; and reinforces the role of the street as a public space that unites the City.

Action CIRC-2.1.1 **(Complete Streets Standards)**: With consideration of street classification and function, design new streets to accommodate all modes of travel, including transit, bicycles, pedestrians, vehicles and parking.

Action CIRC-2.1.3 **(Multimodal Connections)**: Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.

Policy CIRC-2.2 **(Circulation Connectivity and Efficiency)**: Provide greater street connectivity and efficiency for all transportation modes.

Action CIRC-2.2.1 **(Connectivity in Project Review)**: New development shall include the following internal circulation features: A grid or modified grid-based primary street system; Cul-de-sacs are discouraged, but may be approved in situations where difficult site planning issues, such as odd lot size, topography, or physical constraints exist or where their use results in a more efficient use of land, however in all cases the overall grid pattern of streets should be maintained; Traffic-calming measures, where appropriate; Roundabouts as alternative intersection controls, where appropriate; Bicycle and pedestrian connections to adjacent streets, trails, public spaces, and bicycle paths; and short block lengths consistent with City design standards.

Action CIRC-2.2.2 **(Traffic Management)**: Perform routine, ongoing evaluation of the street traffic control system, with emphasis on traffic management, such as signal timing and coordination or the use of roundabouts, to optimize traffic flow along arterial corridors and reduce vehicle emissions.

Goal CIRC-3 **Expand and maintain a comprehensive, safe, and integrated bicycle system throughout the City that encourages bicycling.**

Policy CIRC-3.3 **(New Development and Bikeway Connections)**: Ensure that new residential and nonresidential development projects provide connections to the nearest bikeways.

Action CIRC-3.3.1 **(Bikeway Requirements)**: Require pedestrian and bicycle connections to the Citywide bikeway system every 500 feet, where feasible, as part of project approval and as identified in the Bicycle Master Plan.

Policy CIRC-3.4 **(Bicycle Safety)**: Improve safety conditions, efficiency, and comfort for bicyclists through traffic engineering, maintenance and law enforcement.

Action CIRC-3.4.2 **(Signage, Markings, and Lighting)**: Continue to provide signage and markings to warn vehicular traffic of the existence of merging or crossing bicycle traffic where bikeways make transitions into or across roadways. Delineate and sign bikeways in accordance with Caltrans' standards and install, where feasible, lighting for safety and comfort.

Action CIRC-3.4.4 **(Bicycle Detection at Traffic Signals)**: Continue to install bicycle detectors at high volume bicycle/automobile intersections that have actuated signals.

Policy CIRC-3.6 **(Bicycle Parking)**: Provide safe and secure bicycle parking and support facilities.

Action CIRC-3.6.1 **(Bicycle Parking and Facilities)**: Maintain standards in the Municipal Code for bicycle parking and bicycle-support facilities.

Goal CIRC-4 **Design a safe, convenient, and integrated pedestrian system that promotes walking.**

Policy CIRC-4.1 **(Pedestrian Master Planning)**: Continue to integrate and highlight pedestrian access and dual use bicycle and pedestrian pathways in the Bicycle Master Plan.

P**olicy CIRC-4.2** **(Continuous Network)**: Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.

Policy CIRC-4.3 **(Pedestrian-Friendly Streets)**: Ensure that streets in areas with high levels of pedestrian activity, such as near schools, employment centers, residential areas, and mixed-use areas, support safe pedestrian travel by providing elements such

as detached sidewalks, bulbouts, on-street parking, enhanced pedestrian crossings, and medians.

Action CIRC-4.3.1 **(Safe Pedestrian Crossings)**: As funding allows, improve pedestrian safety at intersections and other crossing locations by providing safe, well-marked pedestrian crossings, bulbouts, on-street parking, audible warnings, or median refuges that reduce crossing widths.

Action CIRC-4.3.2 **(Expand Sidewalk Infrastructure)**: As funding allows, continue installation of sidewalk and pedestrian-related infrastructure in areas not currently served.

Goal CIRC-5 **Support a comprehensive and integrated transit system as an essential component of a multimodal circulation system.**

Policy CIRC-5.3 **(Transit Connectivity in Projects)**: Ensure that new development supports public transit.

Action CIRC-5.3.1 **(Roadway Transit Facilities)**: When planning or retrofitting roadways, consult with BCAG regarding the inclusion of transit stops, shelters, bus turnouts, and other transit improvements.

Action CIRC-5.3.2 **(Roadway Improvements for New Development)**: During project review, consult with BCAG to determine appropriate requirements for the installation of stops and streetscape improvements, if needed to accommodate transit.

Goal CIRC-9 **Reduce the use of single-occupant motor vehicles.**

Policy CIRC-9.1 **(Reduce Peak-Hour Trips)**: Strive to reduce single-occupant vehicle trips through the use of travel demand management strategies.

Action CIRC-9.1.2 **(Existing Employer Trip Reduction Programs)**: Encourage employers to provide transit subsidies, bicycle facilities, alternative work schedules, ride sharing, telecommuting and work at-home programs, and preferential parking for carpools/vanpools.

Action CIRC-9.1.3 **(New Employer Trip Reduction Programs)**: As a condition of project approval, require new nonresidential projects that will employ more than 100 people to submit a Travel Demand Management Plan that identifies strategies, such as those listed in Action CIRC-9.1.2, to reduce single-occupancy vehicle trips.

Policy CIRC-9.3 **(Emphasize Trip Reduction)**: Emphasize automotive trip reduction in the design, review, and approval of public and private development.

Community Design Element

Goal CD-3 **Ensure project design that reinforces a sense of place with context sensitive elements and a human scale.**

Policy CD-3.2 **(Bicycle and Pedestrians)**: Maintain and enhance the pedestrian- and bicycle-friendly environment of Chico.

Action CD-3.2.1 **(Pedestrian-Scale Site Planning)**: Utilize design techniques provided in the City's Design Guidelines Manual that support pedestrian- and bicycle-friendly site planning.

Policy CD-3.3 **(Pedestrian Environment and Amenities)**: Locate parking areas and design public spaces within commercial and mixed-use projects in a manner that promotes pedestrian activity.

Housing Element

Goal H.7 **Encourage energy efficiency in housing.**

Policy H.7.1 Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code and reduce long-term housing costs through planning and applying energy conservation measures.

Parks Public Facilities, and Services Element

Goal PPFS-5 Maintain a sustainable supply of high-quality water, delivered through an efficient water system to support Chico's existing and future population, including fire suppression efforts.

Policy PPFS-5.3 **(Water Conservation)**: Work with Cal Water to implement water conservation management practices.

Action PPFS-5.3.2 **(Water Reuse)**: Encourage new development to install water conserving irrigation systems such as grey water systems.

Goal PPFS-8 **Ensure that solid waste and recyclable collection services are available to City residents.**

Policy PPFS-8.1 **(Waste Recycling)**: Provide solid waste collection services that meet or exceed State requirements for source reduction, diversion, and recycling.

Action PPFS-8.1.1 **(Green Waste)**: Encourage recycling, composting, and organic waste diversion within the City and continue providing green yard waste recycling services, seasonal leaf collection and street sweeping services.

Action PPFS-8.1.6 **(Recyclable Construction Materials)**: Use the Green Building Checklist to encourage the use of recyclable materials in new construction.

Action PPFS-8.1.7 **(Commercial and Industrial Recycling**): Require compliance with the Statewide Mandatory Commercial Recycling requirements for commercial and industrial customers.

Open Space and Environment Element

Goal OS-3 **Conserve water resources and improve water quality.**

Policy OS-3.3 **(Water Conservation and Reclamation):** Encourage water conservation and the reuse of water.

Action OS-3.3.1 **(Water Conservation Program Funding)**: Work with the California Water Service Company to implement a water conservation program to reduce per capita water use 20 percent by 2020 pursuant to the requirements of the State Water Plan.

Action OS-3.3.2 **(Reduce the Use of Turf)**: Limit the use of turf on landscape medians, parkways, and other common areas in favor of native and drought-tolerant ground cover, mulch, and other landscaping design elements, and support the conversion of existing turf to less water-intensive ground cover types.

Action OS-3.3.3 **(Parkway Irrigation)**: Design and monitor irrigation systems in medians and parkways to maximize efficiency and minimize nuisance runoff.

Action OS-3.3.5 **(Water Efficient Landscape Irrigation)**: Enforce the requirements of State water conservation legislation when reviewing landscaping plans for new projects.

Safety Element

Goal S-9 **Protect the community from risks posed by climate change.**

Policy S-9.1 **(Climate Adaptation and Resiliency)**: Promote public safety through the development of climate adaptation and resiliency strategies to reduce risks associated with climate change.

Action S-9.1.1 **(Climate Change Adaptation)**: Update the Safety Element or the City's Local Hazard Mitigation Plan to include climate adaptation and resiliency strategies consistent with Senate Bill 379, including preparation of: (1) a vulnerability assessment that identifies community risks associated with climate change; (2) a set of adaptation and resilience goals, policies, and objectives for the protection of the community; and (3) implementation measures to avoid or minimize climate change impacts.

3.8.4 - Thresholds of Significance

As previously discussed, under CEQA and as held in the California Supreme Court's decision in *Center for Biological Diversity v. California Department of Fish and Wildlife*, GHG impacts would be considered significant if the proposed project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed an applicable Air District GHG Reduction Threshold; or

- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.

As previously mentioned, these thresholds are consistent with the Appendix G Environmental Checklist questions of the CEQA Guidelines. The City of Chico has adopted a qualifying CAP, and therefore the first impact criterion, "conflict with a compliant GHG Reduction Plan if adopted by the lead agency," is applicable for the proposed project. Moreover, the Air District has not adopted a post-2020 threshold, and the other two impact criteria presented above closely align with the two Appendix G Environmental Checklist questions for GHG emissions. Therefore, the City, as Lead Agency, has determined in its discretion to utilize the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether greenhouse emissions impacts are significant environmental effects. Would the proposed project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Section 15064.4(b) of the CEQA Guidelines' amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- Consideration No. 1: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Consideration No. 2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- Consideration No. 3: The extent to which the project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Because there is no applicable quantitative threshold of significance, this analysis will incorporate Considerations 1 and 3 into its impact evaluation.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize, to the extent

feasible, a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts,[37] GHG emissions impacts must also be evaluated on an individual project-level under CEQA.

As the lead agency, the City has the discretion to choose the significance threshold for discretionary projects. The proposed project is evaluated for its consistency with the CAP Update's identified programs and actions to reduce GHG emissions within the City and aid the City in achieving its goal its 2030 target as well as the long-term goal of carbon neutrality by 2045. In accordance with the OPR's General Plan Guidelines and Technical Advisories (2023) and Section 15064(h)(3) of the CEQA Guidelines, projects that are consistent with the CAP may be found to cause a less than significant GHG impact under CEQA.

As explained more fully above, the 2010 Cap-and-Trade Inventory Update provided revised inventory projections to reflect slower growth in emissions during the recession and lower future year projections. The State's 2020 BAU inventory was reduced from 596 MMT CO2e to 545 MMT CO2e. The new GHG reduction level for the State to reach 1990 emission levels by 2020 was 21.7 percent from BAU in 2020. The First Update to the Climate Change Scoping Plan confirmed that the State was on track to achieve the 2020 target and to maintain and continue reductions beyond 2020 as required by AB 32. In addition, the State has reported that the 2016 GHG inventory was below the 2020 target for the first time. Per the 2022 Scoping Plan, California met the 2020 target established in AB 32—a return of GHG emissions to 1990 levels by 2020—years ahead of schedule. For purposes of this analysis, it is assumed that the proposed project would commence construction in phases beginning in 2024 and completely operational in 2041, which is beyond the AB 32 target year. Until a new threshold is identified for projects constructed after-2020, significance is based on making continued progress toward the SB 32 2030 goal.

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted, and the effectiveness of those regulations has been estimated by the agencies during the adoption process and then tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will achieve continued progress toward meeting post-2020 targets.

Although it is not used as a threshold in this analysis, the proposed project's total estimated GHG emissions are compared herein relative to the City's reduction target for 2030 for purposes of evaluating Considerations 1 and 3, as described above. The City's 2030 reduction target of 2.76 MT CO_2e per capita per year is not an adopted CEQA threshold; rather it provides a general frame of reference for considering emissions estimated from the proposed project in terms of moving the City and State forward toward its 2030 and 2045 targets. The 2.76 MT CO_2e per capita target was arrived at by dividing the City's targeted GHG emissions (297,386 MT CO_2e) by the total number of residents anticipated to exist within the City in 2030 (107,712 people). As explained above, the Supreme Court was concerned that new development may need to do more than existing development to reduce GHGs to demonstrate that it is doing its fair share of reductions. As shown below, new development

[37] California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. Website: https://www.ourair.org/wp-content/uploads/CAPCOA-CEQA-and-Climate-Change.pdf. Accessed October 9, 2024.

does do more than existing development and, due to the nature of the sources of GHG emissions related to development, existing development is equally responsible for reducing emissions from the most important sources of emissions. It is important to note that most of the State's regulatory program applies to new and existing development.

The Scoping Plan reduction from BAU accounts for growth projected in the State and assumes that existing development would continue to emit GHGs at the same rate that occurred in the base year (2002–2004 average). The California Department of Finance Report E-5 predicted that population growth in California from 2005 to 2020 would be 13.2 percent. This means that development that existed in 2005 would have produced nearly 87 percent of the State's emissions in 2020. Conversely, new development would only be responsible for about 13 percent of the emissions generated during this timeframe. Accordingly, if measures to reduce emissions from existing development were not available, new development could not provide sufficient reductions to reach the 2020 target even if their emissions were reduced to net-zero.

The State's regulatory program is able to target both new and existing development because the two most important strategies, motor vehicle fuel efficiency and emissions from electricity generation, obtain reductions equally from existing sources and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources such as the Pavley standards that apply to all vehicles purchased in California, the LCFS that applies to all fuel used in California, and the RPS and Renewable Energy Standard that apply to utilities providing electricity to all California homes and businesses. The reduction strategy where new development is required to do more than existing development is building energy efficiency and energy use related to water conservation regulations. For example, new projects are subject to updated Title 24 Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) and Model Water Efficient Landscape Ordinance (MWELO) water conservation requirements. Buildings constructed to the 2013 Title 24 standards use 30 percent less energy than buildings complying with the 2008 standards, with continued improvement expected under the new 2016 and 2019 standards. New buildings and landscapes are much more energy-efficient and water efficient than the development that has been built over the past decades and will require much less energy.

Consistent with the Newhall Ranch Court decision, a project-specific analysis, based on substantial evidence in the record, was prepared that assesses "consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities." To determine significance, the analysis first quantifies project-related GHG emissions with the incorporation of identified project design features and identified regulations, and then compares these emissions with the 2030 emissions target set forth in the City's CAP Update.[38] In addition to this quantitative analysis, this Section conducts a qualitative consistency analysis to

[38] As described in the ARB 2017 Scoping Plan: ". . . achieving net-zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net-zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population)."

evaluate the proposed project's consistency with relevant goals, policies, and actions of the City CAP Update and 2017/2022 Scoping Plans.

3.8.5 - Methodology

Construction Emissions

CalEEMod Version 2022.1.1 was used to estimate potential project-generated GHG emissions during construction. Construction of the proposed project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The analysis of GHG emissions used the same methodology and assumptions as the analysis of air quality impacts in Section 3.3, Air Quality, of this Draft EIR, with the exception of soil haul trucks that have out-of-basin disposal destinations. Soil hauling distances would vary depending on the nature of the contamination. For the worst-case arsenic-impacted waste soils, the anticipated haul route would be via State Route (SR) 99 to the Potrero Hills Landfill Facility at 3675 Potrero Hills Lane in Suisun City, Solano County, California, approximately 130 miles, one way. Lead impacted waste soils, would be hauled to the Chemical Waste Management, Inc. Disposal Facility at 17629 Cedar Springs Lane in Arlington, Oregon, approximately 521 miles one way. For conservative estimates and full consideration of GHG emissions, it was assumed that all soils were transported a one-way distance of 521 miles.

All details for construction criteria air pollutants discussed in Section 3.3.3, Methodology, are also applicable for the estimation of construction-related GHG emissions.

Table 3.8-3 provides the proposed project's annual construction-related GHG emissions.

Table 3.8-3: Estimated Annual Construction GHG Emissions

Year	CO_2e (Metric Ton) (approx.)
2024	2,349
2025	792
2026	1,110
2027	782
2028	952
2029	546
2030	787
2031	370
2032	370
2033	328
2034	271
2035	151
2036	534

Year	CO_2e (Metric Ton) (approx.)
2037	383
2038	383
2039	—
2040	139
2041	139
Total	**9,042**

Notes:
Per estimated project schedule, no construction is slated for 2039.
Source: Appendix C.

Operational Emissions

Emissions from the operational phase of the proposed project were estimated using CalEEMod Version 2022.1.1. The proposed project would include a mix of residential, commercial, and recreational/open space land uses totaling a maximum total of 210,000 square feet of commercial uses and a maximum total of 1,250 residential units. Potential project-generated operational GHG emissions were estimated for area sources (landscape maintenance), energy sources (electricity and natural gas), mobile sources, solid waste, water supply and wastewater treatment, and refrigerant use. Emissions from each category are discussed in the following text with respect to the proposed project. For additional details, see Section 3.3.3, Methodology, for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy, and mobile sources.

The on-road mobile source fleets were modified based on traffic study data from 2022 on the project site and vicinity. The profile includes light-duty and heavy-duty vehicles as well as buses, in portions reflected from local streets as opposed to Emissions Factor (EMFAC) and CalEEMod defaults which reflect Countywide averages.[39] Trip rates are based on trip rate generations from the traffic study, reflecting a resident daily VMT of 11.5 miles and an employee VMT of 2.5 miles.

GHG emission factors for light-duty passenger vehicles were updated to include the increasing number of zero-emission light-duty vehicles that can reasonably be assumed to be delivered, starting 2026, by automakers as per the Advanced Clean Cars II Rule. Estimates of the relative population of internal combustion engines, battery electric engines, and plug-in hybrid engines on the road in future years were based off modeling for the 2020 Mobile Source Strategy using the light-duty vehicle (LDV) Vision Model.[40] Details of this model and the relative percentages used for each of the modeled years are included as supporting materials with the CalEEMod results.

[39] Fehr & Peers. 2022. TIS Vehicle Class Summaries May 2022.
[40] California Air Resources Board (ARB). 2020. Supporting Data for Chapter 5, On-Road Light-Duty Vehicle in the Workshop Discussion Draft 2020 Mobile Source Strategy. Website: https://ww2.arb.ca.gov/sites/default/files/2020-11/LDV_MSS_supporting_materials_ISAS_Nov2020.xlsx. Accessed December 11, 2024.

Emission methods for area sources of GHG emissions, such as landscaping, also account for reductions due to the implementation of the SORE amendment regulations. These reductions are not currently incorporated in CalEEMod for future years by default. Percentages of zero-emission landscaping equipment for each year were estimated using population projections from modeling conducted for the SORE rulemaking. The estimates were based on the modeled small off-road equipment population Statewide under the Small Business Alternative,[41] which has the least stringent phase-out requirements. It was conservatively estimated that approximately 50 percent of the proposed project would be assumed to utilize landscaping equipment that would be zero-emission in 2028, 60 percent in 2030, 75 percent in 2034, and 95 percent in 2042.[42] Adjustments to CalEEMod calculations were made by using this percentage of zero-emission equipment to adjust the number of days gasoline emitting landscaping equipment is modeled within CalEEMod. For year 2028, for example, SORE implementation models project that 50 percent of landscaping equipment will be zero-emissions and therefore emissions were modeled based on 90 days of landscaping emissions instead of the default 180 days. Calculations detailing the reduction in project operational GHG emissions as a result of compliance with the aforementioned regulations are shown in Appendix C.

3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides feasible mitigation measures where necessary.

Greenhouse Gas Emissions and Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-1:	**The proposed project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Construction Emissions

Construction of the proposed project would result in GHG emissions primarily associated with the use of off-road construction equipment and on-road vehicles (haul trucks, vendor trucks, and worker vehicles). CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Methodology in Section 3.3, Air Quality with a modification for out-of-basin haul miles for contaminated soil in the initial year of construction activity. Construction of the proposed project is modeled to last a total of approximately 17 years, from 2022 through 2041. On-site sources of construction-related GHG emissions would consist of off-road equipment and off-site sources, including haul trucks, vendor trucks, and worker vehicles.

As shown in Table 3.8-3, the estimated GHG emissions from construction would be highest in 2024 and 2026, during the buildout period.

[41] California Air Resources Board (ARB). 2021. Public Hearing to Consider Proposed Amendments to the Small Off-Road Engine Regulations: Transition to Zero-Emissions Staff Report: Initial Statement of Reason. Website: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/sore21/isor.pdf. Accessed December 11, 2024.

It is important to note that estimated project phasing is conceptual at this time; actual construction emissions would depend on development activity that takes place in the future. For informational purposes, estimated project-generated construction emissions amortized over the 17-year buildout period would be approximately 611 MT CO_2e per year. However, as noted above, neither the City nor BCAQMD has established a threshold of significance for construction-related GHG emissions.

As discussed in Section 3.3, Air Quality, the proposed project would be required to incorporate MM AIR-3, which stipulates the implementation of construction BMPs. While the primary function of MM AIR-3 is to reduce fugitive dust emissions during project construction, some measures contained in MM AIR-3 would also reduce GHG emissions, such as the restriction on engine idling times and the proper maintenance of construction equipment in accordance with manufacturer specifications. The incorporation of MM AIR-3 would contribute to reductions in GHG emissions during project construction and support the proposed project's contribution to its "fair share" in GHG emission reductions during construction.

Operational Emissions

Operation of the proposed project would generate GHG emissions through motor vehicle trips to and from the project site; landscape maintenance equipment operation; energy use (including natural gas use and generation of electricity consumed by the proposed project); solid waste disposal; generation of electricity associated with water supply, treatment, and distribution and wastewater treatment; and refrigerant use (Table 3.8-4).

As described in Chapter 2, Project Description, the proposed project would include sustainable design features. For example, the proposed project would include EV charging stations as required by the modern building codes to incentivize the use of EVs. These design features would reduce overall per capita energy consumption by allowing future EVs to charge and reduce the need for traditional gasoline powered passenger vehicles. In addition, the proposed project would be required to include solar in compliance with applicable provisions in the City of Chico Municipal Code Title 16R, Buildings Standards; Municipal Code Chapter 16R.02.010 indicates the City adopted California Code of Regulations Title 24, Part 6 (Energy Code) standards for residential buildings and complies with all other applicable standards and requirements.

In addition, the Barber Yard Specific Plan (BYSP) incorporates a number of features that would help to facilitate achievement of the above-referenced energy conservation goals by reducing overall per capita energy consumption as well as reliance on fossil fuels such as coal, natural gas, or oil. For example, as detailed in Chapter 5 of the BYSP, the specific plan is designed with an interconnected network of complete streets that will emphasize walkability over drivability while accommodating all modes of travel. The BYSP transportation plan emphasizes walk/roll and scooter/skate/bike options over single-occupancy vehicle driving options. Further, the BYSP embraces emerging technologies that will likely reduce per capita GHG emissions and increase energy conservation, including home goods delivery, automated vehicles/shuttles, shared bicycle/scooter services, curbside congestion management, and the continuing trend of on-demand ride hailing services (e.g., Uber, Lyft, etc.).

Compliance with these policies would help ensure that the project's energy consumption would not result in the use of energy in a wasteful, inefficient, or unnecessary manner and would thereby help

to reduce GHG emissions. Furthermore, the proposed project would be required to comply with applicable goals and policies of the General Plan and the City's CAP Update, which would further enhance energy conservation. Moreover, the proposed project would be required to comply with City of Chico Municipal Code Title 16R, Buildings Standards; Municipal Code Chapter 16R.16.010 indicates the City adopted California Code of Regulations Title 24, Part 11, Green Building Standards.[43] These measures would require the proposed project to incorporate drought-tolerant landscaping and incorporate water efficient fixtures to reduce outdoor and indoor water consumption, install photovoltaic (PV) systems on all residential buildings, and exceed the CALGreen mandatory requirements. These features would further reduce operation GHG impacts.

The estimated annual operation project-generated GHG emissions from motor vehicles, area sources, energy usage, water usage and solid waste generation, and refrigerants are shown in Table 3.8-4 for the following milestone years:[44]

Table 3.8-4: Estimated Annual Operational GHG Emissions

Emission Source (CO_2e in Metric Ton)	2028 (approx.)	2030 (approx.)	2034 (approx.)	2042 (approx.)
Mobile	3773.8	4,193.5	4,1081.9	2,565.5
Area	4.18	4.52	3.94	0.930
Energy–Electricity	141.57	184.09	236.86	—
Energy – Natural Gas	1,291.4	1,756.6	2,419.7	2,878.5
Water	54.39	66.85	83.65	88.15
Waste	431.63	487.18	557.91	591.55
Refrigerant	5.88	7.08	7.59	8.12
Total	5,702.9	6,699.8	7,391.6	6,132.7
Source: Appendix C.				

Table 3.8-4 illustrates the proposed project's increase and then ultimate decrease of GHG emissions as the State advances regulations on (1) reducing GHG emissions from vehicles and landscaping equipment and (2) increasing renewable energy use. This demonstrates that although project population would increase during buildout of the proposed project, the proposed project's operation GHG emissions would ultimately decrease (which is consistent with the findings discussed in the City's CAP Update, as further discussed herein). Relevant laws and regulations that would help achieve future GHG emissions targets include but are not limited to:

- SB 350, which requires that electricity is sourced by 33 percent renewable sources in 2020 to 50 percent by 2030 with interim targets of 40 percent by 2024 and 45 percent by 2027.

[43] City of Chico Municipal Code. 16R.16.010, Green Building Standards–Adoption. Website: https://codelibrary.amlegal.com/codes/chico/latest/chico_ca/0-0-0-21481. Accessed October 9, 2024.

[44] As explained in Section 3.3, Air Quality, these milestone years reflect various rates of residential population (35, 50, 80, and 100 percent) as the proposed project is gradually built out until full buildout in 2041.

- SB 100, requiring California electricity utility providers to supply all in-State end users with electricity sourced from renewable or carbon-free sources by 2045.
- Executive Order N-79-20, which requires transition to ZEV short-haul/drayage trucks, heavy-duty long-haul trucks, and off-road equipment.
- Advanced Clean Cars II (ACC II), which codifies the light-duty vehicle goals set out in California Governor Newsom's Executive Order N-79-20 and establishes a year-by-year roadmap so that, by 2035, 100 percent of new cars and light trucks sold in California will be ZEVs.
- SORE regulations, which require that all small off-road engines at or below 25 horsepower, sold in California on or after January 1, 2024, be zero-emission. These engines are typically associated with lawn and garden equipment, portable generators, and pressure washers.

As shown in Table 3.8-4, annual proposed project-generated GHG emissions estimated to be approximately 5,703 MT CO_2e in 2028 and approximately 6,133 MT CO_2e in 2042. By 2030, which is the interim efficiency target year of the CAP Update, the proposed project's annual operational emissions are estimated to be approximately 6,700 MT CO_2e. The proposed project's projected population in 2030 is 1,568 residents. Therefore, the proposed project is projected to have an emission rate of 4.27 MT CO_2e per capita by 2030. As such, the proposed project's estimated GHG emissions would be above the City's 2030 efficiency target of 2.76 MT CO_2e per capita per year and would not be consistent with the CAP as it relates to being consistent with the efficiency target. Described more fully below, the City's CAP Update contains several goals and policies that are relevant in this regard. For example, Action E-2-1 contemplates the City's adoption of an ordinance that would ban the installation of natural gas in new residential and commercial buildings to the extent electrification can be accomplished in a feasible, cost-effective manner. The CAP Update recognizes the importance of reducing natural gas usage in both existing and new buildings, subject to cost effectiveness and other feasibility considerations. Consistent with this action, Mitigation Measure (MM) ENER-1 would require future implementing projects to have an all-electric design, with limited exceptions, which would be added as a condition of approval on future entitlements within the BYSP Area. As shown in Table 3.8-5 below, MM ENER-1 would drastically reduce the project's reliance on natural gas and transitions to use of electricity that will be increasingly derived from renewable sources, consistent with CAP's GHG reduction strategies.

Table 3.8-5 shows the proposed project's estimated annual operation GHG emissions with incorporation of MM ENER-1.

Table 3.8-5: Estimated Annual Operational GHG Emissions (with incorporation of MM ENER-1)

Emission Source (CO_2e in Metric Ton)	2028	2030	2034	2042
Mobile	3773.8	4,193.5	4,1081.9	2,565.5
Area	4.18	4.52	3.94	0.930
Energy	616.53	682.78	735.55	498.69

Emission Source (CO_2e in Metric Ton)	2028	2030	2034	2042
Water	54.39	66.85	83.65	88.15
Waste	431.63	487.18	557.91	591.55
Refrigerant	5.88	7.08	7.59	8.12
Total	4,886.4	5,441.9	5,470.6	3,752.9
Source: Appendix C.				

As discussed above, the City's 2030 reduction target of 2.76 MT CO_2e per capita per year is not an adopted CEQA threshold; rather, it provides a general frame of reference for considering emissions estimated from the proposed project in terms of moving the City and State forward toward its 2030 and 2045 targets. The proposed project's GHG significance is determined based on consistency with the CAP Update and 2017/2022 Scoping Plan as shown in Impact GHG-2. Per the analysis in Impact GHG-2, the proposed project would be consistent with State and local plans related to GHG reduction. Impacts would be less than significant with mitigation. Therefore, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. With implementation of MM ENER-1, impacts would be less than significant with mitigation.

Level of Significance

Potentially significant impact.

Mitigation Measures

Implement MM ENER-1.

Level of Significance After Mitigation

Less than significant impact.

Impact GHG-2: **The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases with the exception of those related to the use of natural gas.**

Project Consistency with Chico CAP Update

As noted above, the City's CAP Update was adopted in 2021. The proposed project's GHG impact significance is determined based on consistency with the City's CAP Update, which is a qualified CAP for the purpose of GHG analysis streamlining.

The CAP Update includes 13 measures to be taken by the City, which are aimed at achieving the necessary GHG reductions in Chico, summarized in Table 3.8-6, below.

Table 3.8-6: City of Chico CAP GHG Reduction Measure Summary

Measure Number	Measure Description
Energy	
E-1	Procure carbon-free electricity for the community through a Community Choice Aggregation (CCA) by 2024 and maintain opt-out rates of 5 percent for residential and 15 percent for commercial through 2030 and 2045.
E-2	Eliminate natural gas in all new building construction starting in 2025 to reduce natural gas 6 percent by 2030 and 16 percent by 2045 compared to the adjusted forecast.
E-3	Electrify existing residential buildings starting in 2027 to reduce overall natural gas consumption to 100 therms/person by 2030 and 30 therms/person by 2045.
E-4	Increase generation and storage of local renewable energy.
Transportation	
T-1	Improve active transportation infrastructure to achieve greater than 6 percent bicycle mode share by 2030 and 12 percent bicycle mode share by 2045.
T-2	Improve EV infrastructure to achieve greater than 23 percent EV share of car registrations by 2030, and 90 percent by 2045.
T-3	Improve shared mobility and transit programs and infrastructure.
T-4	Implement parking and curb management procedures that support the mode shift goals of the overall transportation strategy.
T-5	Support implementation of the City's General Plan that promotes sustainable infill development and mixed-use development in new growth areas to reduce Vehicle Miles Traveled (VMT).
Waste	
W-1	Update waste hauler franchise agreements to implement requirements of SB 1383 and achieve 75 percent reduction below 2014 levels in organic waste to 0.4 tons of waste/person by 2025 and maintain through 2045.
Sequestration	
S-1	Increase carbon sequestration by increasing urban canopy cover at least 10 percent by 2030 through new greenscaping programs.
S-2	Develop and Implement the Urban Forest Master Plan.
Outreach and Education	
O-1	Conduct a holistic community outreach and education program to optimize CAP implementation.
Source: City of Chico. 2021. Climate Action Plan Update. Website: https://chico.ca.us/sites/main/files/file-attachments/chico-cap-update_final-draft- complete.pdf?1655413766.	

For each measure listed in Table 3.8-6, above, the CAP Update contains one or more related actions (56 actions in all). Most of the CAP Update actions pertain to government programs and activities and are not affected by private development projects such as the proposed project analyzed in this

document. Nonetheless, Table 3.8-7 lists each action within the CAP Update and assesses whether the proposed project as an individual development proposal complies with each action.

Table 3.8-7: Project Consistency with CAP Update

CAP Update Action	Project Consistency
Action: E-1-1: Procure carbon neutral electricity for the community through Butte Choice Energy Community Choice Aggregation (CCA), in accordance with the ordinance authorizing the implementation of a CCA Program through a Joint Powers Agreement with Butte County, amending Title 15 of the Municipal Code. Automatically enroll community and municipal accounts in the 100 percent renewable energy option by 2024 (or as market conditions prove favorable) with an opt-out option.	**Not Relevant to the Proposed Project.** This action is City-controlled and not a project-specific requirement. Once established, future implementing projects would automatically enroll in Butte Choice Energy.
Action: E-1-2: Work with Butte Choice Energy to conduct targeted community outreach with the aim of maintaining low opt-out rates (5 percent or less for residential accounts and 15 percent or less for commercial accounts). Track opt-out rates through Butte Choice Energy and share results publicly on an annual basis.	**Not Relevant to the Proposed Project.** This action is City-controlled and not a project-specific requirement. Once established, future implementing projects would automatically enroll in Butte Choice Energy.
Action: E-2-1: Adopt a new ordinance which bans the installation of natural gas in new residential and commercial construction by 2025 if not already required by the State's 2025 cycle update to the Building Energy Efficiency Standards (California Code of Regulations Title 24, Parts 6 and 11). The ordinance will only apply for building types where electrification is shown to be cost-effective.	**Consistent with Mitigation**. Per the CAP Update, this action requires the City to adopt a new ordinance prohibiting the installation of natural gas in new residential and commercial construction by 2025, if not already required by the 2025 Building Code. MM ENER-1 requires future implementing projects to have an all-electric design, with limited exceptions, which would be added as a condition of approval on future entitlements within the BYSP Area, consistent with this action.
Action: E-3-1: If not already required by the State's Building Energy Efficiency Standards (California Code of Regulations Title 24, Parts 6 and 11), adopt an electrification ordinance for existing residential buildings to transition from natural gas to electric in two phases, to be implemented through the building permit process. **PHASE I:** Limit expansion of natural gas lines in existing buildings by 2025. **PHASE II:** Require HVAC system replacements and hot water heaters replacements to be all-electric by 2027.	**Not Relevant to the Proposed Project.** This action requires the City to adopt an electrification ordinance for existing residential buildings to transition from natural gas to electric. The proposed project includes construction of new residential uses, among other uses, and does not involve existing residential buildings.
Action: E-3-2: Expand the City's Residential Energy Conservation Ordinance (RECO), Title 16 of the Municipal Code, to cover substantial remodels (over 50 percent). Amend RECO to require electrification and/or energy conservation improvements for substantial remodels (over 50 percent) in the same	**Not Relevant to the Proposed Project.** This action requires the City to expand the City's RECO, and it is not a project-specific requirement. Future implementing projects would comply with all applicable regulations, including the RECO, effective at the time during the entitlement process.

CAP Update Action	Project Consistency
way that RECO currently requires these types of upgrades upon transfer/sale of homes and apartments. The amendment will include electrification options such as installation of a 200 amp panel and/or installation of electric heat pump appliances for HVAC and hot water heaters as well as the option to go beyond the base requirements for energy conservation set forth in the State's Building Energy Efficiency Standards (California Code of Regulations Title 24, Part 6).	
Action: E-3-3: Adopt a plan to decarbonize all municipal buildings by 2045. Work on this plan will begin in 2022. This plan would include a new building electrification policy as well as an existing building natural gas phase-out policy. Decarbonization of municipal buildings will be driven by the PG&E Sustainable Solutions Turnkey Program, which aims to achieve net neutrality in electricity usage by 2030, and work toward full decarbonization by 2045.	**Not Relevant to the Proposed Project.** This action requires the City to adopt a plan to decarbonize all municipal buildings by 2045, and it is not a project-specific requirement. The proposed project also does not include any municipal buildings.
Action: E-3-4: Conduct a feasibility study/existing building analysis to understand the costs associated with electrifying existing residential and commercial buildings in the City of Chico.	**Not Relevant to the Proposed Project.** This action requires the City to conduct a feasibility study to understand the costs associated with electrifying existing residential and commercial buildings and it is not a project-specific requirement. The proposed project does not include existing residential buildings. The proposed reuse of existing on-site buildings would follow the latest regulations, including electrification, at the time of entitlement.
Action: E-3-5: Develop a permit tracking program for existing building electrification to track annual progress in achieving the City's electrification goals.	**Not Relevant to the Proposed Project.** This action requires the City to develop a permit tracking program for existing building electrification and is not a project-specific requirement.
Action: E-3-6: Leverage partnerships with stakeholders to conduct outreach, promotion, and education around new and existing building electrification.	**Not Relevant to the Proposed Project.** This action requires the City to conduct outreach related to existing building electrification and is not a project-specific requirement.
Action: E-3-7: Leverage partnerships with stakeholders and establish funding pathways to ease community members' costs when complying with an electrification ordinance or meeting State standards, including: 1. Investigation of a transfer tax rebate for electric panels and/or other upgrades. 2. Partner with PG&E, Butte Choice Energy, and/or other stakeholders to create or expand electrification/retrofit programs and incentives, especially for low-income residents.	**Not Relevant to the Proposed Project.** This action requires the City to leverage partnerships with stakeholders and establish funding pathways to ease community members' costs when complying with an electrification ordinance or meeting State standards and is not a project-specific requirement.
Action: E-4-1: Partner with PG&E and/or other stakeholders to support and incentivize local on-site	**Not Relevant to the Proposed Project.** This action requires the City to partner with PG&E and/or other

CAP Update Action	Project Consistency
energy generation and storage resources within the community with a focus on underserved communities. This could include a co-located community solar and storage project.	stakeholder and incentivize local on-site energy generation and storage resources and is not a project-specific requirement.
Action: E-4-2: Coordinate City departments to establish and streamline battery storage building permit requirements to allow for easier implementation of these technologies within the community.	**Not Relevant to the Proposed Project.** This action requires the internal coordination within City departments to establish and streamline battery storage building permit requirements and is not a project-specific requirement.
Action: E-4-3: Conduct a feasibility study through the PG&E Sustainable Solutions Turnkey (SST) program to assess cost and applicable locations for installation of battery backup systems, generators, or a micro-grid throughout the City. Engage with the community to determine how local energy generation systems can support community infrastructure as well as critical public infrastructure.	**Not Relevant to the Proposed Project.** This action requires the City to conduct a feasibility study related to battery backup systems, generators, or micro-grid and is not a project-specific requirement.
Action: E-4-4: Implement the comprehensive PG&E SST Program to install renewable energy technology at municipal facilities.	**Not Relevant to the Proposed Project.** This action relates to a electricity program to be implemented on a City level and is not a project-specific requirement.
Action: T-1-1: Implement the Chico Bicycle Plan 2019 Update in accordance with the Plan's goals, objectives, and policies.	**Consistent**. As described more fully in Section 3.17, Transportation, the proposed project reflects an infill development near Downtown Chico and California State University, Chico (CSUC) and includes a comprehensive network of on-site bicycle facilities that would likely generate substantial travel by bicycle within the BYSP Area for recreation as well as provide bicycle access to all land uses within the BYSP Area. These improvements would include connections to existing bicycle facilities on Ivy Street and 16th Street. The proposed project would also work with the City to help remedy, as appropriate, already present deficiencies and restore physical roadway conditions to a state of good repair along several roadways in the BYSP Area as detailed in the Development Agreement. MM TRANS-2a would ensure developers of individual development proposals to implement the BYSP would provide the bicycle facilities consistent with applicable requirements and standards including those set forth in the Chico Bicycle Plan 2019 Update.
Action: T-1-2: Require shaded Park-a-Bike style rack or equivalent when installing bike parking in new development.	**Consistent**. The proposed project includes a mix of housing types, commercial, and open space/recreational uses. Bicycle parking would be provided pursuant to Municipal Code Chapter 19.70 Parking and Loading Standards.
Action: T-1-3: Require major road upgrades to include bicycle infrastructure and its maintenance	**Consistent**. As stated above, the proposed project includes a comprehensive on-site bicycle network,

CAP Update Action	Project Consistency
unless a significant cost/feasibility issue is shown. Update Title 18 Standard Details on each roadway section type to include the applicable bikeway modifications such as Type II lanes and buffered bikeway.	funding to further support broader community benefits to the street network (including bike infrastructure), and MM TRANS-2a would require individual development proposals under the BYSP to adhere to applicable requirements and standards as these relate to off-site bicycle facilities.
Action: T-1-4: Conduct a street/intersection study to identify streets and intersections that can be improved for pedestrians and bicyclists through traffic-calming measures and/or where multiuse pathway opportunities exist to increase active transportation.	**Consistent**. Section 3.17, Transportation, as well as the related non-CEQA operational analysis, provides a robust transportation study that describes, among other things, the existing and proposed roadway network as well as pedestrian and bicycle facilities. As detailed more fully therein, this study takes into appropriate consideration project design features and feasible mitigation measures to ensure all CEQA impacts would be less than significant, and identifies the ways in which the proposed project would help reduce VMT and enhance the use of alternative modes of transportation.
Action: T-1-5: Develop and implement an Active Transportation Plan (consistent with the General Plan) that identifies funding strategies and policies for development of pedestrian, bicycle, and other modes of alternative transportation projects. Work with the City's bike/ped working group to identify high priority areas.	**Consistent**. This action requires the City to develop and implement an Active Transportation Plan and is not a project-specific requirement. Nonetheless, the proposed project is consistent with the intent of this action. As discussed above, Section 3.17, Transportation, as well as the related non-CEQA operational analysis, provides a robust transportation study that describes, among other things, existing and proposed roadway network as well as pedestrian and bicycle facilities. This study takes into appropriate consideration project design features and feasible mitigation measures to ensure all CEQA impacts would be less than significant and identifies the ways in which the proposed project would help reduce VMT and enhance the use of alternative modes of transportation.
Action: T-1-6: Leverage partnerships with stakeholders to conduct ongoing outreach, promotion, and education around active transportation in Chico.	**Not Relevant to the Proposed Project.** This action requires the City to conduct outreach, promotion, and education around active transportation in Chico and is not a project-specific requirement. Nonetheless, the proposed project would promote the intent of this action, by providing active transportation infrastructure within the BYSP.
Action: T-1-7: Create a Bike/Ped/Parking Coordinator position for the City to ensure implementation of active and shared mobility measures.	**Not Relevant to the Proposed Project.** This action requires the City to create a Bike/Ped/Parking Coordinator position for the City and is not a project-specific requirement.
Action: T-2-1: If not already required by the State's Building Energy Efficiency Standards, consistent with the Final Butte PEV Readiness Plan, amend the City's Building Code by 2023 to require the following: EV	**Consistent**. This action requires the City to amend the City's Building Code and is not a project-specific requirement. Nonetheless, the proposed project would comply with applicable EV parking provisions

CAP Update Action	Project Consistency
capable private garages for new single-family and duplex residential development, 20 percent EV charging capable spaces and panel capacity for new multi-family residential development, 20 percent EV charging capable spaces for new commercial development, At least 1 percent working EV charging spaces for all new development and major retrofits.	in the 2022 CALGreen Code, which requires EV parking spaces and/or EV charging equipment for residential and nonresidential buildings.
Action: T-2-2: Work with public and private partners to ensure there are at least 942 publicly accessible DCFC and Level 2 EV chargers with the City's Sphere of Influence, with a focus on providing access to low-income households and affordable housing by 2030. Prioritize locations based on analysis in the Final Butte PEV Readiness Plan.	**Consistent.** This action requires the City to work with various partners to provide EV chargers within the City's Sphere of Influence and is not a project-specific requirement. Nonetheless, the proposed project would support the intent of this action and would comply with applicable EV parking provisions in the 2022 CALGreen Code, which requires EV parking spaces and/or EV charging equipment for residential and nonresidential buildings.
Action: T-2-3: Install new publicly accessible EV chargers at City-owned facilities. Develop and implement a fee for use of City-owned chargers to encourage efficient use and turnover, especially for those without home charging capability. Allocate parking fee revenue toward projects that support EV infrastructure, alternative fuel projects, and active transportation projects.	**Consistent.** This action requires the City to install new publicly accessible EV chargers at City-owned facilities and is not a project-specific requirement. Nonetheless, the proposed project would support the intent of this action and would comply with applicable EV parking provisions in the 2022 CALGreen Code, which requires EV parking spaces and/or EV charging equipment for residential and nonresidential buildings.
Action: T-2-4: Investigate partnerships with public and private stakeholders to develop rebates on at-home electric circuits, panel upgrades, and Level 2 chargers.	**Consistent.** This action requires the City to investigate partnerships with public and private stakeholders to develop rebates on at-home electric circuits, panel upgrades, and Level 2 chargers and is not a project-specific requirement.
Action: T-2-5: Conduct outreach, promotion, and education to encourage EV adoption and infrastructure improvements.	**Consistent.** This action requires the City to conduct outreach, promotion, and education to encourage EV adoption and infrastructure improvements and is not project-specific requirement. Nonetheless, the proposed project supports the intent of this action by providing EV infrastructures within the BYSP.
Action: T-2-6: Establish universal signage and marking requirements for EV parking spaces.	**Not Relevant to the Proposed Project.** This action requires the City to establish universal signage and marking requirements for EV parking spaces and is not a project-specific requirement.
Action: T-2-7: Streamline both the EVSE permitting and inspection processes.	**Not Relevant to the Proposed Project.** This action requires the City to streamline both the EVSE permitting and inspection processes. This is a City-controlled action and not applicable to the proposed project.
Action: T-3-1: Partner with BCAG to improve and expand transit within the City.	**Not Relevant to the Proposed Project.** This action requires the City to partner with BCAG to improve

CAP Update Action	Project Consistency
	and expand transit within the City and is not a project-specific requirement. Nonetheless, the proposed project has reserved 1 acre of land in an effort to support potential future public transit to be pursued by the applicable agencies.
Action: T-3-2: Conduct an active transportation share (e.g., bike-share, scooter-share) feasibility study. Update municipal ordinances to prepare the City for shared mobility programs in accordance with the Bicycle Master Plan and the Downtown Access Plan.	**Consistent**. Section 3.17, Transportation, as well as the related non-CEQA operational analysis, provides a robust transportation study that describes, among other things, existing and proposed roadway network as well as pedestrian and bicycle facilities. As detailed more fully therein, this study takes into appropriate consideration project design features and feasible mitigation measures to ensure all CEQA impacts would be less than significant and identifies the ways in which the proposed project would help reduce VMT and enhance the use of alternative modes of transportation.
Action: T-3-3: Implement General Plan Action CIRC 9.1.2 to reduce single-occupancy vehicle trips associated with work commutes. As a condition of project approval, require new nonresidential projects that will employ more than 100 people to submit a Travel Demand Management Plan that identifies strategies to reduce single-occupancy vehicle trips, including encouraging employers to provide transit subsidies, bicycle facilities, alternative work schedules, telecommuting and preferential parking for carpool/vanpools.	**Consistent.** It is not currently known whether individual future implementing projects would employ more than 100 people. However, future implementing projects would comply with all regulations and requirements, including a condition of approval for a Travel Demand Management Plan if applicable.
Action: T-3-4: Partner with CSUC to conduct a transportation equity study to investigate current barriers for minority, low-income, and senior populations in disadvantaged communities to take transit, walk, bike, use rideshare, or carshare.	**Not Relevant to the Proposed Project.** This action requires the City to conduct a transportation equity study to investigate barriers to alternative modes of transit and is not a project-specific requirement. Nonetheless, the proposed project would further the City's goals to provide diverse modes of transportation by providing active transportation infrastructure within the BYSP.
Action: T-3-5: Support BCAG in conducting local transportation surveys every five years to better understand the community's needs and motivation for traveling by car versus other alternatives such as by bike or bus. Use survey results to inform transit expansion and improvement projects.	**Not Relevant to the Proposed Project.** This action requires the City to support BCAG in conducting local transportation surveys every five years to better understand the community's needs and motivation for traveling by car versus other alternatives, such as by bike or bus, and use survey results to inform transit expansion and improvement projects. This action is not a project-specific requirement. Nonetheless, the proposed project has reserved one acre of land in an effort to support potential future public transit to be pursued by the applicable agencies.

CAP Update Action	Project Consistency
Action: T-3-6: Perform ongoing outreach to carsharing companies about the potential to implement a carsharing program in Chico, preferably electric.	**Not Relevant to the Proposed Project.** This action requires the City to conduct outreach to carsharing companies about the potential to implement a carsharing program in Chico, preferably electric, and is not a project-specific requirement.
Action: T-3-7: Promote use of B-Line for Downtown transit especially. This could include bus open houses and promotion of DoubleMap app.	**Not Relevant to the Proposed Project.** This action requires the City to promote use of B-Line for Downtown transit and is not a project-specific requirement. Further, the proposed project is not located within Downtown.
Action: T-3-8: In accordance with the Downtown Access Plan, designate and use a portion of paid parking revenue to invest in TDM strategies including Actions T-3-1 to T-3-7 that will ensure cost-effective Downtown access by improving transit, bicycle facilities, and create incentives for people to avoid driving.	**Not Relevant to the Proposed Project.** The proposed project is not located within Downtown.
Action: T-4-1: In accordance with the Downtown Access Plan, utilize dynamic pricing for Downtown area parking, increasing costs of parking during times of high usage and special events.	**Not Relevant to the Proposed Project.** The proposed project is not located within Downtown.
Action: T-4-2: Improve curbside management in accordance with the Downtown Access Plan. This may include updating the Municipal Code to require active loading only, prohibit double parking, define locations for additional loading zones, and design loading zone signage.	**Not Relevant to the Proposed Project.** The proposed project is not located within Downtown.
Action: T-4-3: Identify opportunities for development of parklets throughout the City's Downtown, to replace parking spaces with bike parking or outdoor restaurant seating.	**Not Relevant to the Proposed Project.** The proposed project is not located within Downtown.
Action: T-4-4: Update the Municipal Code to establish minimums for carpool/vanpool/shuttle parking requirements in new nonresidential development	**Not Relevant to the Proposed Project.** This action requires the City to update the Municipal Code to establish minimums for carpool/vanpool/shuttle parking requirements in new nonresidential development and is not a project-specific requirement. Future implementing projects would comply with all Municipal Code requirements effective at the time of entitlement.
Action: T-5-1: Continue to support infill growth and thoughtful mixed-use development in new growth areas consistent with the Chico 2030 General Plan and the regional Sustainable Communities Strategy.	**Not Relevant to the Proposed Project.** The BYSP Area is considered an infill site and is located near Downtown Chico and CUSD among other urban services and infrastructure.
Action: W-1-1: Update waste hauler contracts to include expanded organic waste collection. Pass an ordinance by 2022 requiring residential and commercial organics generators to subscribe to	**Not Relevant to the Proposed Project.** This action requires the City to update waste hauler contracts related to expanded organic waste collection and pass an ordinance to require residential and

CAP Update Action	Project Consistency
organics collection programs or alternatively report organics self-hauling and/or backhauling. Allow limited waivers and exemptions to generators for *de minimis* volumes and physical space constraints and maintain records for waivers/exemptions.	commercial organics generators to subscribe to organics collection programs or alternatively report organics self-hauling and/or backhauling. Future implementing residential and commercial projects that would generate organic waste would be required to comply with City requirements related to organic collections that are effective at the time of entitlement.
Action: W-1-2: Adopt an edible food recovery ordinance or similarly enforceable mechanism to ensure edible food generators, food recovery services, and food recovery organizations comply with State requirements to increase recovery rates.	**Not Relevant to the Proposed Project.** This action requires the City to adopt an edible food recovery ordinance and is not a project-specific requirement.
Action: W-1-3: Work with North State Rendering to expand use of organics in the digester. Conduct a pilot to demonstrate effectiveness and identify funding sources for a larger expansion.	**Not Relevant to the Proposed Project.** This action requires the City to work with North State Rendering to expand use of organics in the digester, conduct a pilot program to demonstrate effectiveness, and identify funding sources for a larger expansion. This action is not a project-specific requirement.
Action W-1-4 Engage in organic waste collection capacity planning by executing the following: Estimate Chico's disposal of organic waste in tons, Identify and verify amount of available organics waste recycling infrastructure, Estimate the amount of new or expanded capacity needed to process organic waste, Work with the City of Chico's Recycling and Solid Waste Division and waste haulers to coordinate organic waste delivery to Recology's Oroville Transfer Station and Ostrom Road organics facility, Develop and submit an implementation schedule highlighting planning effort to provide enough new or expanded organics capacity, including timelines and relevant milestones by the end of the report period, Identify proposed new or expanded facilities that could be used for additional capacity.	**Not Relevant to the Proposed Project.** This action requires the City to conduct organic waste collection capacity planning. This action is not a project-specific requirement.
Action: W-1-5: Conduct capacity planning for edible food recovery.	**Not Relevant to the Proposed Project.** This action requires the City to conduct edible food recovery planning. This action is not a project-specific requirement.
Action: W-1-6: Update waste hauler contracts and partner with stakeholders (e.g., Recology, CSUC, Chico State, BEC) to develop and implement an education and outreach program around SB 1383.	**Not Relevant to the Proposed Project.** This action requires the City to update waste hauler contracts and partner with stakeholders (e.g., Recology, CSUC, Chico State, Butte Environmental Council [BEC]) to develop and implement an education and outreach program around SB 1383. This action is not a project-specific requirement.
Action: W-1-7: Update waste hauler contracts to implement an inspection and compliance program for	**Not Relevant to the Proposed Project.** This action requires the City to update waste hauler contracts to

CAP Update Action	Project Consistency
the edible food recovery program and organics procurement program with defined enforcement mechanisms and penalties, to begin prior to 2024. Maintain records of compliance in accordance with SB 1383.	implement an inspection and compliance program for the edible food recovery program and organics procurement program in accordance with SB 1383. This action is not a project-specific requirement.
Action: S-1-1: Implement the Urban Forest Revitalization Program to plant 700 trees by March 2022 (adopted) and 4,500 trees by 2030 (new goal). Focus on areas of the City with low tree canopy cover based on canopy map and optimize carbon sequestration through management of the existing urban forest.	**Consistent**. For purposes of this Draft EIR, it is conservatively estimated that all trees within the BYSP Area may be removed, except for trees within 10 feet of the BYSP Area boundary along the neighborhood to the northeast and east and existing palm trees along the 16th Street corridor. All project-related tree removal would be subject to the City's Tree Preservation Regulations (City of Chico Municipal Code Chapter 16.66), which would result in replacement trees via fee payment for the cumulative tree diameter removed from the project site as appliable. In addition, the applicant is required to prepare a tree protection plan to ensure that on-site trees to remain within the project site, including their root systems, would be adequately protected from potential harm during demolition, grading, and construction (City of Chico Municipal Code Chapter 16.66). New trees would be planted along the proposed street frontages, consistent with City standards, and additional trees would be planted in the front and rear yards of private residences. The proposed project would be implemented consistent with the Urban Forest Master Plan.
Action: S-1-2: Identify and participate in partnership opportunities necessary to convert public and private spaces into water efficient greenspace and increase the City's carbon sequestering greenspace by 2030.	**Consistent.** The proposed project includes a retention/detention basin (stormwater basin) to be located within the off-site improvement area.
Action: S-1-3: Improve management of public open space and park lands, including use of compost, to maximize carbon sequestration. Through permit review, evaluate and ensure that landscaping plans utilize native species identified in the Urban Forest Management Plan where feasible.	**Not Relevant to the Proposed Project.** This action requires the City to improve its management of public open space and park lands. This action is not a project-specific requirement. Note that the project will contribute to the availability of such land.
Action: S-1-4: Require new development to include shade trees for enhanced energy savings, provided it would not interfere with solar installation. Tree species and location would be determined in coordination with the City's Urban Forester. Street tree planting shall also be required for all new single-family subdivisions.	**Consistent**. Landscaping, including shade trees in the form of street trees and private yard trees, would be provided pursuant to applicable requirements and standards, as detailed more fully in the BYSP. Property owners could customize their landscape area with a variety of trees, including species identified in the Urban Forest Management Plan. Street trees would also be subject to approval by the Urban Forest Manager.
Action: S-2-1: Create an actionable strategic plan for the City's urban forest that will guide it to its vision of	**Not Relevant to the Proposed Project.** This action requires the City to create an actionable strategic

CAP Update Action	Project Consistency
a healthy, robust and resilient urban forest over the next 40 years. The plan shall include sections on work programs, policies, ordinances, sustainable urban forest management, design, planting, staffing, stewardship, carbon offset, stormwater management, creek, open space and natural resource management, public tree inventory, and community participation and education.	plan for the City's urban forest. This action is not a project-specific requirement.
Action: S-2-2: Conduct a tree canopy coverage analysis that includes all trees within the city limits, including public and private property trees, open space, natural resources area, creek and riparian areas, and golf courses. The resulting study should provide information on the number of trees and tree density on all identified areas and provide analysis if trees are equitably distributed throughout the City and present a clear picture on where the City should strategically invest resources.	**Not Relevant to the Proposed Project.** This action requires the City to conduct a tree canopy study to understand the number of trees and tree density and provide analysis if trees are equitably distributed throughout the City. This action is not a project-specific requirement. Nonetheless, landscaping, including shade trees in the form of street trees and private yard trees, would be provided pursuant to applicable requirements and standards, as detailed more fully in the BYSP. Property owners could customize their landscape area with a variety of trees, including species identified in the Urban Forest Management Plan. Street trees would also be subject to approval by the Urban Forest Manager.
Action: S-2-3: Conduct a tree planting analysis to gain a better understanding of the urban forest's overall condition. The resulting information should be used to develop management recommendations associated with tree removal, tree planting, trimming cycle adjustments and related maintenance activities. Additionally, the results of this analysis should be used to develop a list of recommended tree species that will be suitable for the City's current environmental conditions as well as anticipated conditions caused by climate change.	**Not Relevant to the Proposed Project.** This action requires the City to conduct a tree planting analysis to understand the urban forest's overall condition. This action is not a project-specific requirement.
Action: O-1-1: Develop a plan for ongoing community outreach strategies to maintain education and promotion of the CAP. This includes regular maintenance of the City's CAP web page and ongoing PR, working with Chico Unified School District (CUSD) to create K-12 lesson plans, and partnering with CSUC and non-profits.	**Not Relevant to the Proposed Project.** This action requires the City to develop a plan for ongoing community outreach strategies to maintain education and promotion of the CAP. This action is not a project-specific requirement.

In summary, as demonstrated above, the proposed project is consistent with the vast majority of the relevant City CAP policies/actions, with the incorporation of identified project design features, coupled with compliance with applicable laws, regulations ,and policies designed to enhance energy efficiency. Moreover, the nature and location of the proposed project, which would involve the densification and/or intensification of urban uses on an under-utilized infill site near Downtown Chico, helps to further reduce GHG impacts.

Additionally, project development would be subject to the City's land use entitlement and building plan check review processes, for which development projects in the City are required to comply with all applicable standards, including, without limitation, the California Building Code and City of Chico regulations.

Therefore, the proposed project would be consistent with the CAP Update.

Consistency with 2017 and 2022 Scoping Plans

A project comparison for consistency with measures for the 2017 and 2022 Scoping Plan updates addresses alignment with the State's planning goals and milestones under SB 32 and AB 1279, respectively.

An evaluation of the proposed project's consistency with the Scoping Plan serves as a roadmap for evaluating a project's current design and determining whether it complies with current policies and is in compliance with planned reduction measures for GHG emissions. The comparison of a project design to Scoping Plan proposals is not by itself a metric for determining project-level significance but a step in showing how the proposed project supports current regulations and is aligned with future GHG reduction strategies in development stages. The proposed project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law and to the extent that they are applicable to the proposed project.

Table 3.8-8 and Table 3.8-9 summarize the measures included 2017 and 2022 Scoping Plans, respectively, and analyzes project consistency compared to these elements.

Table 3.8-8: Proposed Project Consistency with 2017 Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoping Plan Measure	Project Consistency
SB 350 50 percent Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33 percent in 2020 to 50 percent in 2030.	**Not applicable.** This measure would apply to utilities and not to individual development projects. The proposed project would purchase electricity from a utility subject to the Senate Bill (SB) 350 Renewable Mandate and the Renewable Portfolios Standard (RPS) requirements. SB 100 has increased the 2030 RPS standards to 60 percent by 2030, superseding the increase required by SB 350.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Not applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. The proposed project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Not applicable.** This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the project site would benefit from the standards.

Scoping Plan Measure	Project Consistency
Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent**. It is expected that trucks (e.g., for delivery) would travel to and from the BYSP Area. It is expected that deliveries throughout the State would be made with an increasing number of Zero-Emission Vehicle (ZEV) delivery trucks. The proposed project would not inhibit the Mobile Source Strategy because the proposed project would include electric vehicle (EV) charging consistent with the applicable California Green Building Standards Code. As such, future ZEVs could access the project site to charge batteries as part of normal goods delivery operations.
Sustainable Freight Action Plan. The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero-emission operation and maximize near-zero-emission freight vehicles and equipment powered by renewable energy by 2030.	**Consistent.** This measure applies to owners and operators of trucks and freight operations. It is expected that deliveries throughout the State would be made with an increasing number of ZEV delivery trucks, including trips that would be coming to and from the project site. The proposed project would not inhibit the Mobile Source Strategy because the proposed project would include EV charging consistent with the applicable California Green Building Standards Code Nonresidential Mandatory Measure. As such, future ZEVs could access the project site to charge batteries as part of normal goods delivery operations.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent.** The proposed project would not include major sources of black carbon. This measure revolves around ARB's SLCP Reduction Strategy that was released in April 2016 as a result of SB 650. SB 650 required the State to develop a strategy to reduce emissions of SLCPs. DPM reductions have come from strong efforts to reduce on-road vehicle emissions. Car and truck engines used to be the largest sources of anthropogenic black carbon emissions in California, but the State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years. These policies are based on existing technologies.
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	**Not applicable.** The proposed project does not include the development of a Regional Transportation Plan.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Not applicable.** The proposed project is not one targeted by the cap-and-trade system regulations, and, therefore, this measure does not apply to the project. However, the post-2020 Cap-and-Trade Program indirectly affects people and entities who use the products and services produced by the regulated industrial sources when increased cost of

Scoping Plan Measure	Project Consistency
	products or services (such as electricity and fuel) are transferred to the consumers.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, State, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the Governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not applicable**. The project site is in a built-up urban area and would not be considered natural or working lands.
Source: California Air Resources Board (ARB). 2017. California's 2017 Climate Change Scoping Plan. November.	

Table 3.8-9: Proposed Project Consistency with 2022 Scoping Plan Greenhouse Gas Emission Reduction Strategies

Scoring Plan Measure	Project Consistency
Light-Duty Vehicles: Smart Growth/Reduce Vehicle Miles Traveled. VMT per capita reduced 25 percent below 2019 levels by 2030, and 30 percent below 2019 levels by 2045.	**Consistent.** As discussed in Section 3.16, Transportation, VMT impacts for the proposed project are less than significant.
Deploy ZEVs. Medium-Heavy and Heavy Heavy-Duty Trucks. This measure is supported by Executive Order N79-20 and plans in the AB 74 ITS Report: 100 percent of MD/HDV sales are ZEV by 2040.	**Consistent.** Medium-heavy and heavy heavy-duty trucks traveling within the site would be compliant with truck Fuel Economy Standards: California Phase II GHG Standards and would transition to ZEV by 2045. Infrastructure for the proposed project would be designed to support this transition to ZEV. The Scoping Plan does not rely upon on VMT reductions from the freight and truck transportation sector.
Decarbonize buildings. All-electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed Statewide by 2030.	**Consistent with Mitigation.** MM ENER-1 requires future implementing projects to have an all-electric design, with limited exceptions, which would be added as a condition of approval on future entitlements within the BYSP Area, consistent with this measure.
Low Carbon Fuels for Transportation (LCFS). Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	**Consistent.** Off-road construction equipment would utilize renewable diesel in compliance with the In-Use Off-Road rule. On-road diesel trucks would also utilize these fuels consistent with the LCFS. It is expected that deliveries throughout the State would be made with an increasing number of ZEV delivery trucks, including trips that would be coming to and from the project site. The proposed project would not inhibit the Mobile Source Strategy because the proposed project would include EV charging consistent with the

Scoring Plan Measure	Project Consistency
	applicable California Green Building Standards Code. As such, future ZEVs could access the project site to charge batteries as part of normal goods delivery operations.
Low Carbon Fuels for Fuels for Buildings and Industry. In 2030s renewable natural gas (RNG) blended in pipeline, ramping up to 2040. Dedicated hydrogen pipelines constructed to serve certain industrial clusters.	**Consistent.** Natural gas utilized by the proposed project would contain this RNG blend as implemented by the Scoping Plan and the energy providers.
Coordinate supply of liquid fossil fuels with declining CA fuel demand. Phase-out oil and gas extraction operations by 2045. Carbon Capture and Sequestration (CCS) on majority of petroleum refining operations by 2030. Interim goals are to reduce petroleum production reduced in line with its demand.	**Not applicable.** The proposed project is not related to the petroleum industry.
Generate clean electricity. Electric sector GHG target of 38 MMT CO_2e in 2030 and 31 MMT CO_2e in 2045. This GHG target is determined to meet the loads associated with the scenario and corresponds to meeting the 2021 SB 100 Joint Agency Report's 100 percent of retail sales with eligible renewable and zero-carbon resources definition.	**Not applicable**. The proposed project will benefit indirectly from these goals; however, there are no actions related to the proposed project itself.
Decarbonize industrial energy supply. Electrification goals by industry sector specific to Food Industry, Agriculture, and Chemical and Allied Products and Pulp and Paper Industry for milestone years 2030 and 2045. Other Industrial Manufacturing: 0 percent energy electrified by 2030 and 50 percent by 2045. Construction Equipment: 25 percent energy demand electrified by 2030 and 75 percent by 2045. Retire all combined heat and power facilities by 2040.	**Consistent.** Construction equipment used for the proposed project would comply with California Air Resources Board (ARB) off-road regulations meeting milestones for electrification as required by regulations as promulgated. Starting in 2024, amendments to the off-road In-use Diesel Rule require use of renewable diesel consistent with the 2022 Scoping Plan and implementing the LCFS.
Reduce non-combustion emissions. This involves two strategies targeting methane and hydrofluorocarbons (HFCs). • Increase capture of methane and from landfill and dairy digester and from the oil and gas infrastructure components. • Introduction of low global warming potential (GWP) refrigerants introduced as building electrification increases mitigating HFC emissions.	**Consistent.** The proposed project would use low GWP refrigerants consistent with current California Significant New Alternatives Policy (SNAP) regulations.
Compensate for remaining emissions. This measure uses Carbon Dioxide Removal (CDR) to compensate for remaining emissions.	**Not applicable.** This measure relates to remaining emissions and is not applicable at the individual project level.
Source: California Air Resources Board (ARB). 2022. Scoping Plan for Achieving Carbon Neutrality. November.	

In summary, the proposed project would be consistent with CAP Update and 2017/2022 Scoping Plan. Therefore, the proposed project would be consistent with State and local plans for GHG reduction. Impacts would be less than significant with implementation of MM ENER-1.

Level of Significance

Potentially significant impact.

Mitigation Measures

Implement MM ENER-1.

Level of Significance After Mitigation

Less than significant impact.

3.8.7 - Cumulative Impacts

The geographic scope of the cumulative GHG emissions analysis is the Sacramento Valley Air Basin (SVAB), which includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and portions of Solano and Placer counties. In a larger sense, however, the relevant geographic area is the entire Earth, as explained by the California Supreme Court. "[B]ecause of the global scale of climate change, any one project's contribution is unlikely to be significant by itself" (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 219). "'With respect to climate change, an individual project's emissions would most likely not have any appreciable impact on the global problem by themselves, but they would contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the proposed project's incremental addition of greenhouse gases is 'cumulatively considerable" in light of the global problem, and thus significant'" (id., quoting Crockett, Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World (July 2011) Golden Gate U. Envtl. L.J. 203, 207–208)). If a project would contribute its "fair share" of what will be required to achieve those long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal.4th 220–223).

Accordingly, if a project is designed and built to incorporate certain design elements as well as feasible mitigtion measures, such as those that help facilitate achievement of relevant goal, policies, actions, requirements and standards under the comprehensive regulatory framework as well as relevant General Plans, local codes and CAPs, such as MM ENER-1 (all-electric design), then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. The proposed project would emit new GHG emissions, as would other past, present, and reasonably foreseeable projects within the Air Basin. However, the proposed project, similar to other cumulative developments, would be required to adhere to applicable laws and regulations and implement applicable mitigation measures (such as those discussed above). Moreover, the proposed project, similar to other cumulative development, would incorporate numerous project design features that would reduce GHG emissions. As such, the proposed project would not make a cumulatively considerable

contribution to any cumulative impact related to GHG emissions. Moreover, the proposed project would not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. As demonstrated above, with implementation of the identified mitigation, the proposed project would be consistent with the City's CAP Update, which is a qualified CAP. The proposed project would not have a significant GHG impact with incorporation of mitigation and would contribute its "fair share" of what will be required to achieve California's 2030 target as well as the long-term climate goal of carbon neutrality by 2045. Therefore, the proposed project would not have a cumulatively considerable contribution to cumulative impacts.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.9 - Hazards and Hazardous Materials

3.9.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based, in part, on the Environmental Restriction (1999) (Appendix G), Phase I and Phase II Environmental Site Assessment prepared by Cameron-Cole (Appendix G), City of Chico General Plan, as well as research on various hazardous materials related websites and databases.

The following public comments were received related to hazards and hazardous materials.

- Requests that any changes to drainage and water quality within, upstream, or downstream of the project site be analyzed and addressed.
- Requests that a State environmental regulatory agency provide regulatory concurrence that the project site is safe for construction and the proposed use.
- Expresses concern over the possibility for historic or future activities on or near the project site to result in the release of hazardous wastes/substances on the project site.
- Requests that in instances in which releases have occurred or may occur, further studies should be carried out to delineate the nature, extent, and threat of the contamination, as well as applicable mitigation measures.
- Requests sampling of all imported backfill associated with the project.
- States that the proposed project has an associated Land Use Covenant (LUC) restricting the use or interferences with groundwater or capped portions of the project site.
- Requests language to ensure that the conditions of the LUC are followed.
- Requests coordination for any activities impacted by the terms of the LUC with California Department of Toxic Substances Control (DTSC).
- States that the project site is within a contaminated site that has undergone remediation of contaminated soils and groundwater, with concentrations of pentachlorophenol (PCP) exceeding cleanup goals.
- Requests consideration of risks to workers and residents caused by inhalation or ingestion of contaminated shallow soils and the asphalt cap.
- Requests continued operation and monitoring of groundwater wells on the property.
- Expressed concern for the reliability of the asphalt cap to be used as a parking structure.
- Expressed concern for the disruption and release of hazardous materials onto adjacent properties.
- Requests further soil sampling for lead and heavy metals on-site.
- Requests testing of the Crouch Ditch, prior railroad right-of-way, and Estes Land.
- Requests clarification for extent and breadth of hazardous materials testing.

3.9.2 - Environmental Setting

Fundamentals

Hazards

This description of existing conditions focuses on hazards from hazardous materials and wastes as well as wildland fire hazards. A hazard is a situation that poses a level of threat to life, health, property, or the environment. Hazards can be dormant or potential, with only a theoretical risk of harm. However, once a hazard becomes active, it can create an emergency. A hazardous situation that has already occurred is called an incident. Emergency response is action taken in response to an unexpected and dangerous occurrence in an attempt to mitigate its impact on people, structures, or the environment. Emergency situations can range from natural disasters to hazardous materials problems and transportation incidents.

Hazards Materials and Wastes

Hazardous materials include but are not limited to hazardous materials, hazardous substances, and hazardous wastes, as defined in Section 25501 and Section 25117, respectively, of the California Health and Safety Code. A hazardous material is any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released; and any material that a handler or an administering regulatory agency under Section 25501 has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment. Various properties may cause a substance to be considered hazardous, including:

- Toxicity—causes human health effects;
- Ignitability—has the ability to burn;
- Corrosivity—causes severe burns or damage to materials; and
- Reactivity—causes explosions or generates toxic gases.

Hazardous Building Materials

Many older buildings contain building materials that consist of hazardous materials. These materials include lead-based paint, asbestos-containing material, and polychlorinated biphenyls (PCBs).

Prior to the United States Environmental Protection Agency (EPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Disturbances such as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe health effects, especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the EPA in the 1970s. In addition, many types of electrical equipment contained PCBs as an insulator, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the EPA banned PCB use in new equipment and began a program to phase out certain existing PCB-containing equipment. For example, fluorescent lighting ballasts manufactured after

January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit.

Hazardous Substances

A hazardous substance can be any biological, natural, or chemical substance, whether solid, liquid, or gas, that may cause harm to human health. Hazardous substances are classified on the basis of their potential health effects, whether acute (immediate) or chronic (long-term). Dangerous goods are classified on the basis of immediate physical or chemical effects, such as fire, explosion, corrosion, and poisoning. An accident involving dangerous goods could seriously harm human health or damage property or the environment. Harm to human health may happen suddenly (acute), such as dizziness, nausea, and itchy eyes or skin; or it may happen gradually over years (chronic), such as dermatitis or cancer. Some people can be more susceptible than others. Hazardous substances and dangerous goods can include antiseptic used for a cut, paint for walls, a cleaning product for the bathroom, chlorine in a pool, carbon monoxide from a motor vehicle, fumes from welding, vapors from adhesives, or dust from cement, stone, or rubber operations. Such hazardous substances can make humans very sick if they are not used properly.

Hazardous Wastes

Hazardous waste is any hazardous material that is to be discarded, abandoned, or recycled. The criteria that define a material as hazardous also define a waste as hazardous. Specifically, materials and waste may be considered hazardous if they are poisonous (toxic); can be ignited by open flame (ignitable); corrode other materials (corrosive); or react violently, explode, or generate vapors when mixed with water (reactive). Soil or groundwater contaminated with hazardous materials above specified regulatory State or federal thresholds is considered hazardous waste if it is removed from a site for disposal. If handled, disposed, or otherwise handled improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous Materials Listing

The Cortese List is a list of known hazardous materials or hazardous waste facilities that meet one or more of the provisions of Government Code Section 65962.5, including:

- The list of hazardous waste and substances sites from the DTSC EnviroStor database.[1]
- The list of leaking underground storage tank (LUST) sites by county and fiscal year from the State Water Resources Control Board (State Water Board) GeoTracker database.[2]

[1] California Department of Toxic Substances Control (DTSC). 2024. DTSC's Hazardous Waste and Substances Site List—Site Cleanup (Cortese List). Website: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed December 11, 2024.

[2] California State Water Resources Control Board (State Water Board). 2024. Geotracker Sites/Facilities by County. Website: https://geotracker.waterboards.ca.gov/sites_by_county. Accessed December 11, 2024.

- The list of solid waste disposal sites identified by the State Water Board with waste constituents exceeding hazardous waste levels outside the waste management unit.[3]
- The list of active cease-and-desist orders and cleanup and abatement orders from the State Water Board.[4]
- The list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by the DTSC.[5]

Screening Levels

Regional Screening Levels

The EPA identifies Regional Screening Levels (RSLs) that have been developed using risk assessment guidance from the EPA Superfund program. They are risk based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. RSLs are considered by the Agency to be protective for humans (including sensitive groups) over a lifetime; however, RSLs are not always applicable to a particular site. RSLs are generic; they are calculated without site-specific information. They may be recalculated using site-specific data.[6]

RSLs are used for site "screening" and as initial cleanup goals, if applicable. RSLs are not de facto cleanup standards and should not be applied as such. The RSL's role in site "screening" is to help identify areas, contaminants, and conditions that require further federal attention at a particular site.[7] If chemical-specific concentrations for individual contaminants in air, drinking water, and soil are exceeded, further investigation may be warranted.[8]

Environmental Screening Levels

The San Francisco Regional Water Quality Control Board has developed Environmental Screening Levels (ESLs) to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. ESLs address concerns encountered at contaminated sites and are protective of human health, water quality, and the environment. ESLs do not constitute policy or regulation.[9]

ESLs provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. ESLs address a range of media (soil, groundwater, soil gas, and indoor air) and a range of concerns (e.g., impacts to drinking water, vapor intrusion, and impacts to aquatic habitat).[10]

[3] California Environmental Protection Agency (Cal/EPA). 2024. Cortese List Data Resources. Website: https://calepa.ca.gov/sitecleanup/corteselist/. Accessed December 11, 2024.
[4] Ibid.
[5] California Environmental Protection Agency (Cal/EPA). "Cortese" list of sites subject to Corrective Action pursuant to Health and Safety Code 25187.5. Website: https://www.calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/.Accessed December 11, 2024.
[6] United States Environmental Protection Agency (EPA). 2023. Regional Screening Levels (RSLs) – Frequent Questions. Website: https://www.epa.gov/risk/regional-screening-levels-rsls-frequent-questions. Accessed December 11, 2024
[7] Ibid.
[8] United States Environmental Protection Agency (EPA). 2023. Regional Screening Levels (RSLs) – User's Guide. 2023. Website: https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide. Accessed December 11, 2024.
[9] San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB). 2024. Site Cleanup Program. Website: https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/sitecleanup.shtml. Accessed December 11, 2024.
[10] Ibid.

The United States Environmental Protection Agency (USEPA) has also established RSLs for over 100 commonly encountered contaminants. The most recent iteration of RSLs was published in November 2023 and includes screening levels for soil, groundwater and soil gas. Under most instances, it is unlikely the presence of a chemical in soil, groundwater or soil gas at concentrations below the corresponding RSLs would pose a significant threat to human health, water resources, or the environment.

Constituents of Concern

Table 3.9-1 identifies RSLs and ESLs for constituents of concern on the project site. Maximum natural background soil levels are also provided for context.

Table 3.9-1: Regional and Environmental Screening Levels for Constituents of Concern on the Project Site

Constituent	RSL[1]	ESL[2]	Maximum Natural Background Soil Levels[3,4]
Lead	n/a[5]	80 mg/kg	97 mg/kg
Arsenic	n/a	.26 mg/kg	11 mg/kg
PCE (tetrachloroethylene)	11 µg/m^3	15 ug/m^3	n/a
TPH-g (total petroleum hydrocarbons-gasoline)	n/a	3300 µg/m^3	n/a
Benzene	0.36 ug/m^3	3.2 ug/m^3	n/a

Notes:
µg/m^3 = micrograms per cubic meter
mg/kg = milligrams per kilogram of soil
[1] United States Environmental Protection Agency (EPA). 2023. Regional Screening Levels (RSLs)
[2] San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB) Environmental Screening Levels (ESLs)
[3] Kearney Foundation of Soil Science Division of Agriculture and Natural Resources University of California. 1996. Kearney Foundation Special Report. Background Concentrations of Trace and Major Elements in California Soils. March. Website: https://ucanr.edu/sites/poultry/files/297094.pdf. Accessed April 19, 2024
[4] Maximum natural background soils levels provided as a reference.
[5] RSLs/ESLs omitted where not applicable/referred to in the analysis for this proposed project.

Project Site History

The Diamond Match Company

In 1903 the Diamond Match Company purchased approximately 242 acres of land adjacent to the railroad, and development of the Chico Diamond Match Company Factory began the same year with the construction of the Carpenters Camp. Construction of the factory's first permanent buildings, including the Brick Engine House and the Engineering Department buildings took place between 1903 and 1906. The Engineering Department buildings include the Machine Shop, the Blacksmith Shop and the Foundry. Other structures constructed in the same time period include the Main Power House, Sorting Shed, Steam Dry Kilns, Dry Lumber Shed, Planning Mill, Storehouse, Second Storehouse, Sash, Door and Box Factory, and Fairburn Hall. In 1906 the Match Factory building was constructed (Appendix G).

By 1915 the Millwork and the Engineering Department were closed, and portions of the Engineering Department converted to lumber storage. The Sash and Door Factory, as well as the two Lumber Sheds near the Planning Mill were demolished. While the millwork activity was slowing, the Match Factory doubled in size and capacity. The Factory Office, Block and Book Shop and Match Block Storage Building were constructed during this time (1915-1916). The Match Factory also established an Apiary in 1914 on the second floor of one of the warehouses before moving to the Main Power House, and this operation quickly became one of the largest bee supply manufacturers. Between 1947 and 1975, the Diamond Match Company experienced a steady decline. The Match Factory officially closed in 1975 and was demolished soon after. Fairburn Hall burned down and 1978 and the majority of the buildings at Barber Yard were demolished (Appendix G).

Louisiana-Pacific Corporation

Louisiana-Pacific Corporation, a building materials manufacturing company, acquired Barber Yard in 1984. Louisiana-Pacific likely constructed the existing large warehouse at the north of the Barber Yard Specific Plan (BYSP) Area for the manufacturing of plastic molding. The plant closed in 1989 but it is believed the company continued to own the property until 1997. The existing warehouse constructed by Louisiana-Pacific is believed to have been used for prune drying and packaging in the early 1990s; in 1994 the building began use as recreational vehicle (RV) storage, which is still in operation today (Appendix G).

Remediation History

Asphalt Cap

Fungicides and adhesives were used during the operation (i.e., the remanufacturing process) of the Finished Wood Products Division and remanufacturing facility, which closed in 1989. A pentachlorophenol (PCP)-based fungicide was used to treat wood products in a dip tank and concrete impoundment, and polyvinyl acetate adhesives were used for finger jointing and veneering. Other compounds used included solvents, paints, and lacquer thinner. Use of these substances resulted in contamination of soil and groundwater at the project site.[11]

In 1991, the DTSC issued an Imminent and Substantial Endangerment Determination for the property, identifying elevated concentrations of arsenic in soil and PCP in groundwater. The California DTSC order required the Louisiana-Pacific Corporation to conduct soil removal activities, complete a Remedial Investigation and Feasibility Study and prepare a Remedial Action Plan (RAP). In 1992, the Louisiana-Pacific Corporation complied with the order and completed soil removal activities, which resulted in the removal of more than 10,000 cubic yards of contaminated soil. The soil was removed to meet the human health cleanup levels approved by the DTSC. In 1994, a Baseline Human Health Evaluation (BHHE) was completed to evaluate the potential public health risk posed by soil and groundwater contamination. It was determined that the 1992 soil removal successfully reduced contamination levels. However, additional compounds of concern were identified in the BHHE—which included PCP, tetrachlorophenol, methylene chloride, 1,1-dichloroethene, ethylbenzene, xylenes in groundwater and arsenic in the soil.[12]

[11] VESTRA Resources (VESTRA). 2018. Draft Five-Year Review 2013 through 2017 Chico Remanufacturing Facility) Formerly Diamonds Match Company Plant). January 2018.

[12] Ibid.

In April 1995, the RAP was approved by the DTSC; the RAP recommended groundwater extraction and treatment, excavation of arsenic contaminated soil, and the construction of an asphalt cap to entomb the arsenic contaminated soil. In November 1995 the contaminated soil was excavated and placed beneath the asphalt cap along the southwestern boundary of the BYSP Area. In 1996, construction of the groundwater extraction and treatment system was initiated; the system became operational in 1997 and continued to operate until it was discontinued in 2003.[13]

In 1999, Louisiana-Pacific signed a long-term Operation and Maintenance Agreement with DTSC; pursuant to the agreement a deed restriction was placed on the property to restrict the use of the asphalt cap area to industrial or commercial and to prohibit the removal of groundwater from the property.

As part of the Operation and Maintenance Agreement, Louisiana-Pacific is required to conduct a review of the remedial actions every 5 years, pursuant to Section 121 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Since the completion of the remediation activities, Louisiana-Pacific has completed four 5-year review documents, with the latest draft completed in 2018.[14] The 2018 review concluded that remediation activities are performing as designed and continue to protect human health and the environment. The recommendations in the report include continued groundwater sampling and maintenance of the asphalt cap, and to maintain the deed restriction prohibiting the use of groundwater without DTSC approval.

With the exception of the asphalt cap area, the DTSC agrees that the BYSP Area is no longer contaminated. The asphalt cap is deed restricted, with no activity permitted that may disturb the cap, and no person shall remove or use any groundwater from the property.[15]

Presence of Hazardous Materials

Phase I Environmental Site Assessment

Cameron-Cole completed a Phase I Environmental Site Assessment (Phase I ESA) for the proposed project on October 7, 2022 (Appendix G). The goal of the Phase I ESA was to identify the presence or likely presence of hazardous substances or petroleum products on the project site under conditions that indicated an existing release, a past release, or a material threat of a future release of any hazardous substances or petroleum products in, on or at the project site. As part of the Phase I ESA, a comprehensive government agency database search was performed as well as site reconnaissance.

Record Search Results

The project site is identified on the Historical Underground Storage Tanks (HIST UST); the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) No Further Remedial Action Planned (NFRAP); Historical CERCLIS listings (CERCLIS-HIST); Resource Conservation and Recovery Act (RCRA) Large Quantity Generators; RCRA Non-Generators (RCRA

[13] VESTRA Resources (VESTRA). 2018. Draft Five-Year Review 2013 through 2017 Chico Remanufacturing Facility) Formerly Diamonds Match Company Plant). January 2018.
[14] The 2018 5-year review document is the latest that is publicly available.
[15] VESTRA. 2018. Draft Five-Year Review 2013 through 2017 Chico Remanufacturing Facility) Formerly Diamonds Match Company Plant). January 2018.

NONGEN); RCRA Small Quantity Generators; Spills, Leaks, Investigations, and Cleanups (SLIC) Region 5; ENVIROSTOR; Hazardous Waste Generators, and Lien databases.

The UST databases include sites where a tank and any underground piping connected to the tank has at least 10 percent of its combined volume underground. The HIST UST database is a record of historical USTs. The HIST UST–CA database is associated with a 6,000-gallon diesel underground storage tank (UST), two 6,000-gallon unleaded gasoline USTs, a 500- gallon diesel UST, a 12,000-gallon diesel UST, a 1,000-gallon unleaded gasoline UST, a 3,000-gallon diesel UST, and a 10,000-gallon UST registered to Chico Remanufacturing in 1988. No violations were identified in connection with this database listing.

The CERCLIS NFRAP was decommissioned by the EPA in 2014. According to the last update in 2013, there is one CERCLIS NFRAP site located on the project site. The CERCLIS NFRAP database states the subject property does not qualify for National Priorities List (NPL) based on existing information. The CERCLIS-HIST database contains information on the assessment and remediation of federal hazardous waste sites. The CERCLIS-HIST database is listed as State-lead cleanup, but no further information is provided.

The RCRA NONGEN database lists licensed non-generators and includes selective information on-site which generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Non-generators do not currently generate hazardous waste. The RCRA LQG, RCRA NONGEN, and RCRA SQG database listings for the project site do not list the materials managed on-site, but all listings reported no violations or inspections.

SLIC REG 5 and ENVIROSTOR database listings for the project site are associated with the ongoing monitoring of an on-site pentachlorophenol (PCP) plume and arsenic contaminated soil.

The Hazardous Waste Generator (HWG) database listing for the project site is associated with hazardous waste generated however all listings are currently marked as inactive.

The LIENS (CERCLA Lien Information) database listing for the project site is associated with restrictions related to the placement of the asphalt cap for arsenic contaminated soil and the current PCP groundwater monitoring.[16]

Site Reconnaissance

Site reconnaissance was performed by a Cameron-Cole representative on August 23, 2022. Site reconnaissance consisted of visual observations of readily accessible areas on the project site to determine the presence or absence of hazardous substances, petroleum product storage areas or spills as indicated by stressed vegetation, soil staining, storage tanks and drums, etc. At the time of the site reconnaissance, certain areas in the northern portion of the project site were fenced off due to the use of goats for vegetation management, and the southern portion of the site could only be observed from the northern and western boundary as access to those areas was not allowed.

[16] Identified as Controlled Recognized Environmental Conditions (CRECs).

The BYSP Area is primarily unused land with a large RV storage warehouse and adjacent small, unused structure in the northern portion, two unused historic brick buildings near the central western boundary, and an asphalt lot used as part of soil remediation in the southwest portion of the BYSP Area. The foundations of four additional buildings were observed near the brick buildings. The BYSP Area is primarily unused and is covered with thick vegetation. The off-site improvement area consists of land formerly and currently used as orchards.

Cameron-Cole did not observe any hazardous substances and petroleum products in connection with identified uses. Drums were observed on the project site; however, these drums were located inside of the storage warehouse but were either empty or contained general trash. A pad mounted transformer adjacent to the large warehouse and two pole mounted transformers were observed in the central sections of the project site but no staining or corrosion observed. *De minimis* oil staining of the warehouse parking lot was observed during the site reconnaissance.

Cameron-Cole did observe monitoring wells on the subject property at the time of site reconnaissance. As indicated in the Phase I ESA (Appendix G), according to the Victor Industries November Semi-Annual Groundwater Monitoring Report and the Barber Debris Temporary Handling Facility 2018 California Wildfires and Environmental Assessment Report, a number of monitoring wells are present on the BYSP Area site.

Recognized Environmental Conditions

The Phase I ESA identified five Recognized Environmental Conditions (RECs), which are described as follows:

REC 1: Pentachlorophenol (PCP) Groundwater Monitoring

The Phase I ESA found that the project site is currently being monitored for an on-site PCP contamination. A deed restriction is in place which prohibits the use of groundwater without DTSC approval. This ongoing monitoring represents a REC as defined by the applicable standard.

REC 2: Volatile Organic Compound Plume

An off-site trichloroethylene (TCE) plume from Victor Industries extends beneath the project site. This plume is actively monitored by the off-site responsible party. A soil gas investigation performed in May 2021 by RCC as a part of due diligence activities identified the presence of tetrachloroethylene (PCE), benzene, and total petroleum hydrocarbons-gasoline (TPH-g) in soil gas at levels exceeding residential ESLs.

REC 3: Historical Underground Storage Tanks

The project site was listed on the HIST UST database. The listing is associated with eight gasoline and diesel USTs that were registered with Chico Remanufacturing in 1988. No information regarding the current status of the USTs was available. As such, this is a data gap and indicates the possibility that unidentified contamination could be present, which represents a REC to the project site.

REC 4: Former Dump and Burn Areas

The Phase I ESA identified past instances of dumping, burying and burning waste on the project site. A 1988 Chico Press Gazette article reported trash piles along the eastern boundary of the project site

and along the Ivy Street right-of-way. The waste identified in the Phase I ESA consisted of car batteries, drums of used motor oil, solvents and other industrial waste liquids, railroad ties, old vehicles, etc. It was also reported that the Diamond Match Company burned trash in long trenches and covered the burn areas with dirt; For instance, a 1970 correspondence between the City of Chico and Diamond National Corporation indicated that a 40'x40'x5' area of buried trash was excavated near the northeast corner of the project site and was transported off-site. The 1988 Chico Gazette article indicated that debris observed in the other areas along the Ivy Street right-of-way was not removed. The 2018 Five-Year Review also identifies the Normal Avenue Dump, near the eastern boundary of the project site, and the South Orchard Burn Dump, near the southern boundary of the project site (these locations are also reflected in Appendix G, Figure 2). A "teepee burner" used to burn lumber, was formerly located adjacent to the Normal Avenue Dump. Based on the information provided, in the opinion of Cameron-Cole, the indications of trash and industrial waste being dumped, buried, and burned on-site constitutes a REC in connection with the project site.

REC 5: Historical Pesticide and Herbicide Application in Orchards

According to historical aerial maps, orchards have been present in the BYSP Area periodically since 1941. The off-site improvement area to the south also appears to have been used as an orchard since at least 1941. Historically, lead-arsenate was a commonly used pesticide from the late 1880s up to the 1960s. No documentation is available regarding pesticide use in the orchards. As lead-arsenate and next generation organo-chlorine pesticides have a long residence life in surface soils at application areas, the lack of documentation of pesticide use represents a significant data gap and a REC.

Controlled Recognized Environmental Conditions

The asphalt-capped pad near the western boundary of the project site is a remediation effort to address arsenic contamination. The contamination is associated with the removal of rail spur ballast from across the project site. The asphalt cap is to remain intact and activity use limitations (AULs) are applicable to this area as specified by the deed restriction noted above under REC 1. The current AULs associated with the asphalt cap represent a Controlled Recognized Environmental Condition (CREC).

Historical Recognized Environmental Conditions

According to the records search report, 10,000 cubic yards of contaminated soil was removed from the project site in 1992 to address contamination from various areas used at the Chico Remanufacturing Facility including, but not limited to two fuel oil bunkers, dry kilns, burn and dump areas, paint disposal pit, detention pond, etc. The soil was cleaned up to residential levels and was approved by the DTSC in 1994. As such, the Phase I ESA concluded that the soil contamination has been addressed to the satisfaction of the regulatory agency and constitutes a Historical Recognized Environmental Condition (HREC) in connection with the subject property as defined by the applicable standard.

Vapor Encroachment Summary

Cameron-Cole conducted a review of available environmental records and conditions observed on the subject property and adjoining parcels to evaluate the potential for a vapor encroachment

condition (VEC) to exist on the project site. Based on the inferred groundwater gradient, depth to groundwater, and physical setting information, the potential for a VEC to exist on the subject property cannot be ruled out.

Summary of Victor Industries TCE Plum, Monitoring, and Current Conditions

According to a November 2021 Semi-Annual Monitoring Report, an off-site TCE groundwater plume from an upgradient Victor Industries, extends below the southern section of the subject property. This plume is actively monitored by the off-site responsible party.

As indicated in the Phase I ESA (Appendix G), according to a May 2021 Updated Statement of Subsurface Conditions at Barber Yard- Redevelopment Considerations report, prepared by RCC Group, LLC (RCC), RCC conducted several due diligence activities on the project site to assess the subsurface condition on the property in relation to the Victor Industries volatile organic compound (VOC) plume. A soil vapor survey detected concentrations of tetrachloroethene (PCE), benzene, and TPH-g. The identified concentrations of PCE and benzene exceeded the Tier 1 Sub slab ESLs.

Conclusion

In summary, the Phase I ESA revealed evidence of RECs in connection with the project site, specific to the BYSP Area. The BYSP Area is currently being monitored for on-site PCP groundwater contamination; a deed restriction prohibits the use of groundwater without DTSC approval. An asphalt-capped pad near the western boundary is a remediation effort for arsenic contamination, which is to remain intact with AULs under the proposed project. These AULs represent a CREC while ongoing PCP groundwater monitoring represents an REC.

Eight gasoline and diesel USTs were registered in 1988 on the project site, however no information regarding the current status of the USTs was available. The unidentified contamination that could possibly be present represents a REC. Additionally, a TCE plume extends beneath the project site and is identified on several databases. Soil vapor samples taken in 2021 identified pollutant concentrations that exceed the ESLs. As such, the TCE groundwater plume and corresponding PCE and benzene soil vapor concentrations constitute a REC as well.

The Phase I ESA identifies the removal of 10,000 cubic yards of contaminated soil in 1992; residual soils were cleaned up to residential levels and finalization of removal approved by the DTSC in 1994.

Evidence of former on-site burn dump areas and a “teepee burner” were identified. These indications of trash and industrial waste being dumped, buried, and burned on-site does not constitute a REC.

Lastly, Envirosite aerial maps found that orchards have been present in portions of the project site periodically since 1941. Historically, lead-arsenate was a commonly used pesticide from the late 1880s up to the 1960s. No documentation is available regarding historical use of pesticides on the project site, however, lead-arsenate and next generation organo-chlorine pesticides have a long residence life in surface soils at application areas, the lack of documentation of pesticide use represents a significant data gap and a REC considering the proposed residential development of the proposed project.

Phase II Environmental Site Assessments

Cameron-Cole completed a Phase II Site Investigation Report (Phase II ESA) for the proposed project in January 2024 (Appendix G). The goal of the Phase II ESA was to further investigate and address RECs identified as part of the 2022 Phase I ESA. Assessment of one REC, namely the ongoing pentachlorophenol monitoring of project site groundwater, was not further assessed in the Phase II, as long-term groundwater monitoring and remediation is already underway. For the purposes of the Phase II ESA, the RECs are identified and described as follows:

REC 1: Volatile Organic Compound Plume

The Phase I ESA identified a VOC plume, originating from an off-site and upgradient source, which extends beneath the project site. This plume is actively monitored for trichloroethylene (TCE) by the DTSC on behalf of the former off-site responsible party, Victor Industries. A limited soil gas investigation performed as a part of due diligence activities in 2021 by RCC identified the presence of tetrachloroethylene (PCE), benzene, and total petroleum hydrocarbons-gasoline (TPH-g) in soil gas at levels exceeding residential RSLs.

REC 2: Historical Pesticide and Herbicide Application in Orchards

Historical aerial photographs have identified former stone fruit or almond orchards present on the project site since at least 1941. Lead-arsenate was a commonly used pesticide on stone fruit orchards from the late 1880s until the early 1960s. No documentation is available regarding actual pesticide use in the orchards. Assuming agrichemicals were applied in these orchards, lead-arsenate and next generation organo-chlorine pesticides have a long residence life in surface soils at application areas and therefore historical residues could remain on-site.

REC 3: Former Dump and Burn Areas

The Phase I ESA identified areas of former dump piles, consisting of household trash as well as industrial solid wastes, which reportedly had been burned and buried in selected locations at the project site. Additionally, historic site maps and historical information provided in remedial assessment documents prepared for the DTSC have identified the Normal Avenue Dump, near the eastern boundary at 20th Street, and the South Orchard Burn Area/Dump, near the southern boundary and north of Estes Road. A “teepee burner,”, used to burn off-spec lumber pieces, was located adjacent to the Normal Avenue Dump.

REC 4: Historical Underground Storage Tanks

As of 1988, eight on-site gasoline and diesel USTs were registered with the L-P Chico Remanufacturing Facility. A significant data gap is associated with the absence of tank disposition and/or closure information, including analytical soil data that could confirm and attempt to identify the presence or absence of subsurface contamination potentially associated with these unaccounted USTs.

Subsurface Scanning Investigation

A subsurface scanning investigation (SSI) was performed in November 2022 across the BYSP Area, which included scanning the BYSP Area with a combination of electromagnetic field detection and reflective induction equipment to identify potential subsurface anomalies. Exhibit 3.9-1 shows areas

identified during these scans were further investigated using ground penetrating radar (GPR), which produces imagery that assists in defining the shape and dimensions of identified subsurface anomalies[17]. The objectives of this scope of work were to identify areas of the site that may be in conflict with planned soil vapor and/or drilling activities and to identify the locations of buried debris within the dump and burn areas (REC 1 and REC 3); and identify the possible locations of former USTs that are unaccounted for at the site (REC 4). Additionally, the SSI informs the need for, and locations of, additional sampling and/or assessment required to further the understanding of the identified RECs.

[17] Inset exhibit is in the Phase II Site Investigation Report contained in Appendix G.

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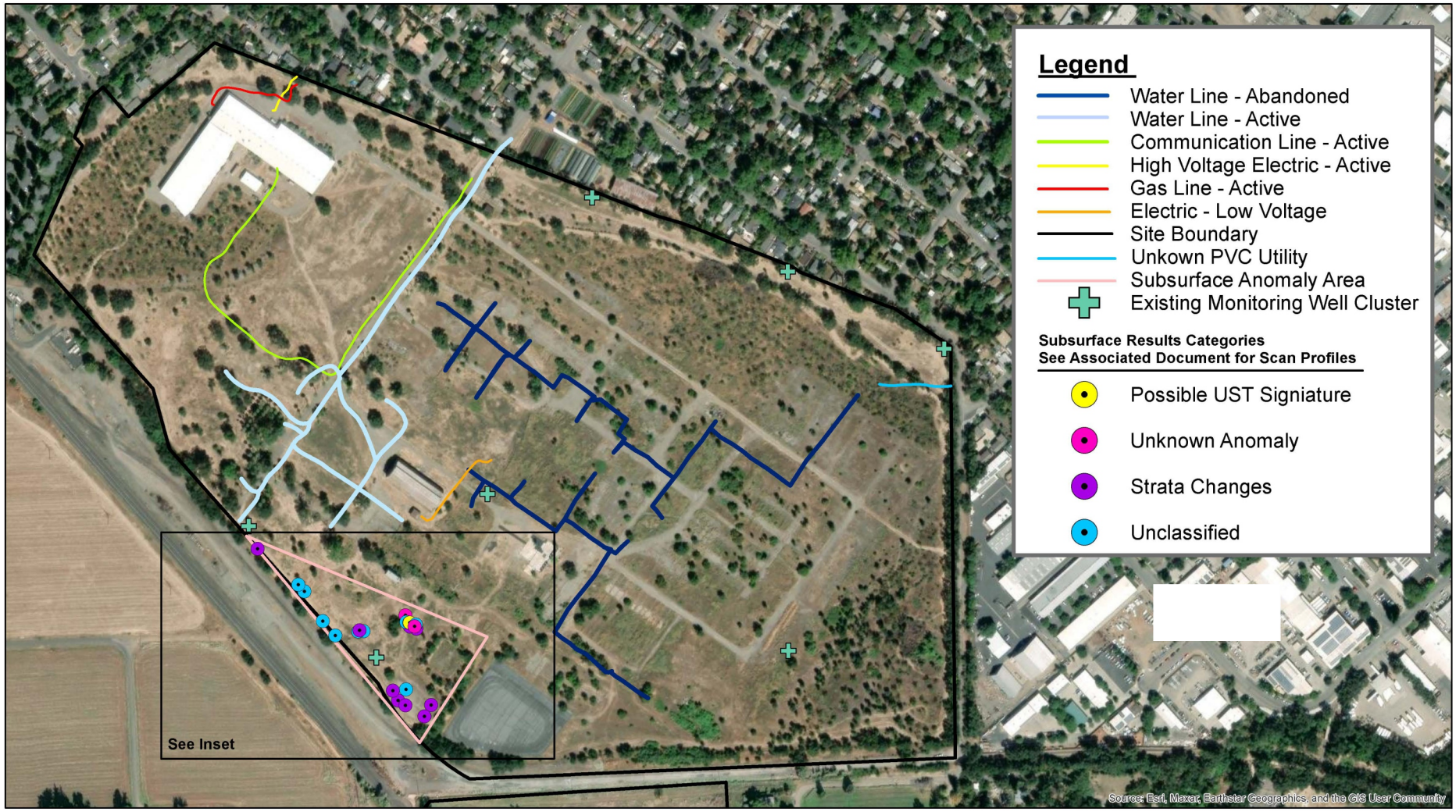

Source : Subsurface Investigation conducted by Foresite Engineering Surveys, Data Mapped by Cameron-Cole.

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Exhibit 3.9-1
Subsurface Investigation Results

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Results

Water Lines: Abandoned water lines were identified throughout the project site with the majority located along prior roadways and former building footprints. Active water lines consisting of PVC piping were identified along the access road extension of W 16th Street extending from the main entrance to the western boundary.

Communication Lines: Active communication lines were identified along the extension of West 16th Street on-site and connecting to the metal warehouse storage building in the northern section of the Site.

Electric Lines: An active high voltage electric line was identified along the northeastern side of the metal warehouse storage building, extending off-site to the northeast. An active low voltage electric line was identified along the southeastern side of the Engineering Building.

Gas Lines: An active natural-gas line was identified along the northeastern side of the metal warehouse storage building, extending off-site to the northeast.

Other: An unknown PVC utility was identified near the northeastern corner of the site and extending about 250 feet from the eastern boundary adjacent to Normal Avenue.

Existing Monitoring Wells: Seven groundwater monitoring well clusters were identified throughout the BYSP Area. These wells are associated with groundwater monitoring conducted for the off-site and upgradient Victor Industries site.

Subsurface Anomalies: A number of areas of interest were identified along the southwestern boundary of the site using GPR. A possible UST was identified, as well as three large cylindrical objects (likely metallic) approximately 2 to 5 feet below ground surface (bgs). Nine points identified the presence of strata changes, which indicate a change in subsurface materials or possible soil disturbance. Two unknown anomalies were observed adjacent to the possible UST and 10 unclassified points, likely associated with nonmetallic buried items, were also identified.

Soil Gas Investigation

A soil gas investigation completed in 2021 by RCC Group identified the presence of PCE, benzene, and TPH-g in soil gas at levels exceeding residential ESLs. To further refine the soil gas data set and identify potential priority areas within the BYSP Area, new soil gas wells were installed. In November 2022, nine dual-nested soil gas wells were installed, and each well was equipped with two probes installed at 7 and 15 feet bgs. Four vapor pins were also installed: two were placed in abandoned buildings and two were placed in concrete foundations of former structures. See Exhibit 3.9-2.

Cameron-Cole analyzed the soil gas samples for VOCs by EPA method TO-15 and for helium using method modified ASTM D-1946. Soil gas samples were collected following DTSC protocol of the July 2015 Advisory of Active Soil Gas Investigations. The helium shroud method was used to collect the soil gas samples. A description of the helium shroud purge and sample procedure is included in the work plan included in Appendix G.

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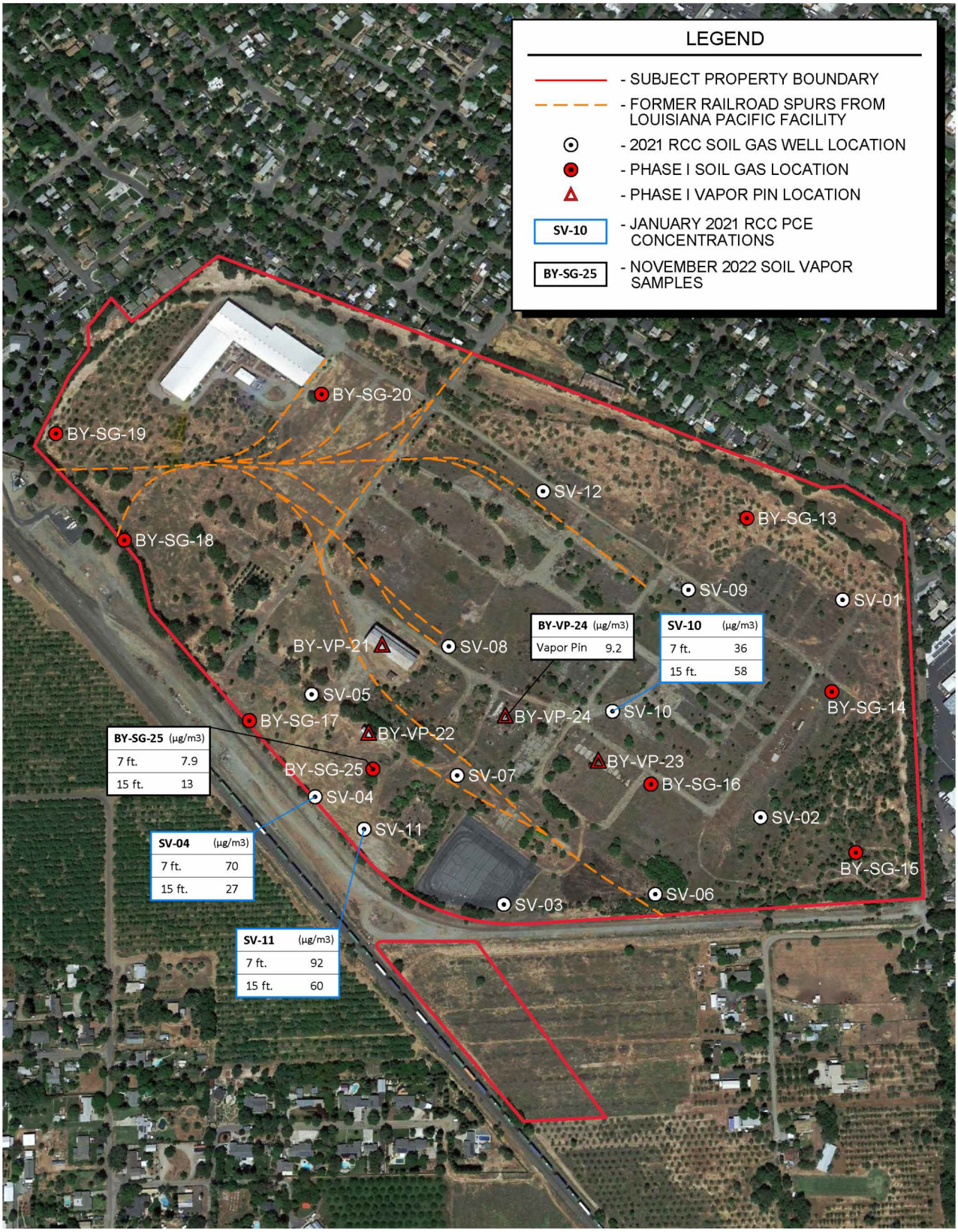

Source: Cameron-Cole, 2024.

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Exhibit 3.9-2
Soil Gas PCE Concentrations November 2022

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Soil gas samples for VOCs from the nine newly installed soil gas wells and four new vapor pins were collected between November 28 and 30, 2022.

Results

Several VOCs were identified in the collected soil gas samples, including the following:

- PCE
- 2,2,4-trimethylpentane
- ethanol
- freon 11
- hexane

Soil gas analytical results for samples collected in November 2022 are detailed in Table 3 of the Phase II ESA and certified analytical reports are included as Appendix C of the Phase II ESA (Appendix G). No VOCs were detected at concentrations exceeding residential ESLs and only one result for PCE exceeded the residential RSL. These data indicate that PCE may be present over a limited area at concentrations slightly exceeding RSLs; however, the Phase II ESA concluded that the "significance of this result should be evaluated in the context of specific development plans at this location and in consultation with DTSC, who will approve the final screening value."

Soil Investigation

Soil sampling was performed in November 2022 to further assess the significance of the historical herbicide and pesticide use in the orchard areas (REC 2) and within the former dump and burn areas (REC 3) to assess the potential impacts from these historic activities. Exhibit 3.9-3 displays the locations of all soil samples.

The November 2022 soil sampling and analysis consisted of the following:

- REC 2 Soil Samples
  - 60 soil samples collected from within the orchard areas from a depth of 0.5-1-feet bgs.
  - Analyzed 60 samples for lead and arsenic by EPA method 6010B.
  - Analyzed 40 samples for pesticides by EPA 8081 and EPA 8141 and herbicides by EPA Method EPA 8151.
- REC 3 Soil Samples
  - 18 soil samples collected from within the former dumping and burn areas from a depth of 0.5-1-foot bgs.
  - Analyzed samples for TPH-d/MO by EPA 8015, CAM-17 metals by EPA 6010/7471, pH by USEPA 9045 and polycyclic aromatic hydrocarbons (PAHs) by EPA 8270.

Additional soil samples were collected in March 2023 to further define the lateral and vertical distribution of arsenic and lead identified in select November 2022 soil samples.

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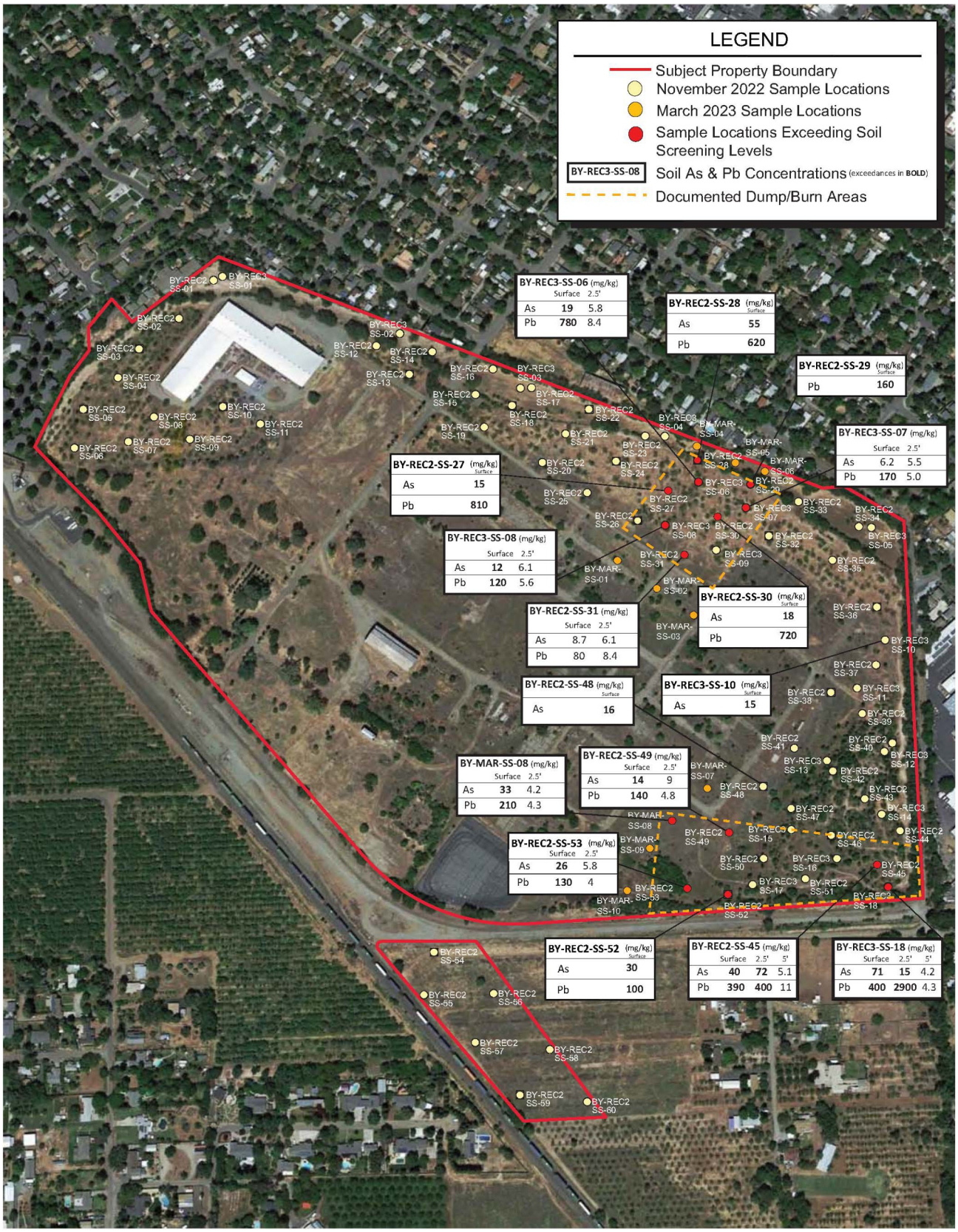

Source: Cameron-Cole, 2024.

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Exhibit 3.9-3
Soil Sample Locations and Results 11/2022 and 3/2023

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The March 2023 soil sampling and analysis consisted of the following:

- 18 soil samples collected from six new soil borings locations (three samples per boring) from the Normal Avenue Dump and vicinity at depths of 0.5, 2.5, and 5 feet bgs to further characterize the lateral and vertical extent of observed impacts.
- Eight soil samples collected from four borings locations (two samples per boring) collected from previously sampled locations in the Normal Avenue Dump at depths of 2.5 and 5 feet bgs.
- 12 soil samples collected from four new boring locations (three samples per boring) around the South Orchard Burn Area/Dump, at depth of 0.5, 2.5, and 5 feet bgs to further characterize the lateral and vertical extent of observed impacts.
- Eight soil samples collected from four borings locations (two samples per boring) collected from previously sampled locations in the South Orchard Burn Area/Dump, at depths of 2.5 and 5 feet bgs to further characterize the vertical extent of observed impacts.
- Three samples of brick-and-mortar debris found in the Normal Avenue Dump, South Orchard Burn Area/Dump areas to evaluate whether this material represents a possible source for the observed arsenic and lead concentrations in the soil.
- Samples were analyzed for arsenic and lead by EPA 6010B.

Results

The Phase II ESA included the following results for the November 2022 soil sampling:

- REC 2 Analytical results:
  - Lead was detected above soil screening levels (SSLS) (> 97 mg/kg) in nine surface soil samples with concentrations ranging from 120 mg/kg to 810 mg/kg
  - Arsenic was detected above background levels (>11 mg/kg) in 12 surface soil samples with concentrations ranging from 12 mg/kg to 40 mg/kg
  - Eight of the nine sample locations with elevated lead concentrations also had elevated levels of arsenic
  - The pesticides 4,4’-DDD, 4,4’-DDE, 4,4’-DDT, and dieldrin were detected in several samples at concentrations well below their respective SSLs
- REC 3 Analytical Results
  - Lead was detected above SSLs in three samples with concentrations ranging from 170 mg/kg to 780 mg/kg
  - Arsenic was detected above background level in three samples with concentrations ranging from 15 mg/kg to 70 mg/kg
  - TPH-motor oil was detected in three sample locations, however, concentrations were below SSLs
  - No PAHs were detected in any samples

The following results were collected from the analysis of the March 2023 soil samples:

- **Normal Avenue Dump/Burn Area**: Six borings were installed to determine the southwestern and northeastern lateral extent of arsenic and lead concentrations observed in the November 2022 samples collected in Normal Avenue Dump area. Arsenic and lead concentrations in surface soil from these six borings were below SSLs, indicating that the lateral extent of elevated concentrations of these metals is limited to the previously defined boundary. Deeper samples from these borings were not analyzed.

  An additional four borings were installed within the Normal Avenue Dump area to vertically delineate the extent of surface soil impacts identified in November 2022 samples. March 2023 soil results from the Normal Avenue Dump area at 2.5 feet bgs did not contain concentrations of arsenic or lead exceeding SSLs. These data indicate that the vertical extent of arsenic and lead at the Normal Avenue/Avenue Dump is limited to surface soils. Based upon these results, the deeper samples held were not analyzed.

- **South Orchard Burn Area/Dump**: Four borings were installed to determine the western lateral extent of arsenic and lead concentrations observed in the November 2022 samples collected in South Orchard Burn Area/Dump. Arsenic and lead concentrations in surface soil from three of the four borings were below SSLs. One sample from a new sample location was observed to have exceedances of arsenic and lead in the surface sample. Concentrations at 2.5 and 5 feet bgs were below SSLs.

  An additional four borings were installed within the South Orchard Burn Area/Dump to vertically delineate the extent of surface soil impacts identified in November 2022 samples. In the South Orchard Burn Area/Dump, November 2022 and March 2023 arsenic and lead concentrations exceeding SSLs were identified in two distinct and separate areas. Four samples located along the western boundary of the South Orchard Burn Area/Dump, contained lead and arsenic in surface samples above SSLs but not at 2.5 feet bgs. Two samples located along the eastern boundary of the South Orchard Burn Area/Dump indicated arsenic and lead exceedances in surface and 2.5 feet bgs samples but not at 5 feet bgs.

- **Brick-and-Mortar Samples**: No concentrations of lead and arsenic exceeding SSL were identified in the brick-and-mortar samples.

Conclusions

Subsurface Scanning Investigation

The SSI identified active and abandoned utility lines throughout the BYSP Area, including active and abandoned waters lines, an active communication line, active high and low voltage electric lines, an active gas line, and an unknown PVC utility. Subsurface anomalies were also identified using GPR along the southwestern boundary, from the western end of West 16th Street to the north and the asphalt cap to the south. A possible UST was identified along with strata changes, and unknown anomalies that could represent buried infrastructure or waste disposal. A soil gas well was installed adjacent to the possible UST location and no VOC concentrations were detected.

The anomalies identified along the southwestern BYSP Area boundary could represent buried infrastructure or debris which could pose a concern during development of the BYSP Area.

Soil Gas Investigation

The November 2022 soil gas investigation did not identify VOCs in soil gas at concentrations exceeding conservative residential soil gas RSLs.

Soil Investigation

The November soil samples identified concentrations of lead and arsenic exceeding SSLs primarily within or adjacent to the reported location of the Normal Avenue Dump and South Orchard Burn Area/Dump at depths of 0 to 0.5 feet bgs. Additional soil sampling in March 2023 confirmed that the vertical extent of arsenic and lead exceeding the SSL in this area was limited to surface soils within the Normal Avenue Dump area. Within the South Orchard Burn Area/Dump area the vertical distribution of arsenic and lead exceeding SSLs was similarly limited to surficial soils, with the exception of one location in the southeast corner of the BYSP Area where arsenic and lead impacts extended to 2.5 feet bgs.

Furthermore, TPH-mo and pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin) concentrations were identified in several locations. However, analyses indicated that concentrations were below SSLs. The soil samples analyzed did not identify concentrations of PAHs.

Radon Risk

Radon is a carcinogenic, radioactive gas resulting from the natural breakdown of uranium in soil, rock, and water. Radon gas enters a building through cracks in foundations and walls. Once inside the building, radon decay products may become attached to dust particles and inhaled, or the decayed radioactive particles alone may be inhaled and cause damage to lung tissue. The EPA has established a safe radon exposure threshold of 4 picocuries per liter of air (pCi/L).

The Phase I ESA includes federal and State radon data for the 95928 Zip Code. The EPA designates Butte County as Radon Zone 3, the lowest risk Zone. Zone 3 Counties have a predicted average screening level of less than 2 pCi/L of radon.[18]

Lead, Asbestos, and Other Hazardous Building Materials

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the EPA in the 1970s.

The Phase I and Phase II ESAs do not discuss asbestos-containing materials (ACM) and lead-based paint (LBP) as a concern associated with the project site. However, due to the age of structures on-site, the presence of such materials cannot be ruled out.

Existing Schools

Three schools are located within 0.25 mile of the project site: Little Sprouts Preschool is approximately 95 feet from the northwest boundary of the project site; Mi Escuelita Maya is

[18] United States Environmental Protection Agency (EPA). 1993. Map of Radon Zones Fact Sheet. Website: https://nepis.epa.gov/Exe/tiff2png.cgi/000002J4.PNG?-r+75+-g+7+D%3A%5CZYFILES%5CINDEX%20DATA%5C91THRU94%5CTIFF%5C00000414%5C000002J4.TIF. Accessed December 11, 2024.

approximately 182 feet north of the northern boundary of the project stie; and WaterSprites Swim School is approximately 200 feet southeast of the boundary of the project site. The project site does not currently contain any schools, and none are proposed as part of the project.

Hazardous Materials Incidents

The unauthorized releases of hazardous materials into the environment could create many environmental impacts including impacts to properties, natural environment, and human health. The significance of these impacts could vary according to the location and quantity of the substance released. Hazardous releases can occur in areas that treat, store, transport and use hazardous materials. In the event of an unauthorized release of hazardous materials/substances, emergency response measures must be implemented to ensure the protection of human and natural environmental health from risk.

The vicinity of the project site contains agricultural, residential, as well as institutional and public facilities uses. Agriculture is the primary land use to the west and south of the project site and is a major industry in the City. Accidental releases of pesticides, fertilizers, and other agricultural chemicals may be harmful to the public's health, safety, and the environment. In addition, State Route (SR) 99, which is a major State transportation route, is located approximately 1.1 miles east of the project site. This transportation route as well as the agricultural uses listed above, transport large quantities of hazardous materials in the vicinity of the project site. Because of the rural nature of the project site and its location along a route that regularly transports hazardous materials, the area faces risks associated with the potential for hazardous materials emergencies (accidental releases). The City of Chico Fire Department recognizes the unlikely potential for a large chemical release to occur which could expose thousands of people to hazardous or toxic vapors. The City of Chico Fire Department Hazardous Materials Response Team (HMRT) has embraced an all-hazards approach to emergency response to ensure effective protection from the risk of hazardous materials releases.

Emergency Response

In addition to emergency response to hazardous materials incidents, Butte County implements programs to facilitate emergency preparedness for other types of incidents. Specifically, the County has an Emergency Operations Plan that describes procedures during a response to an emergency, including response in the City of Chico. The plan provides guidance for managing response operations, identifies organizational structures and relationships, and describes roles, responsibilities, and functions for the protection of life, property, and natural, cultural, and heritage resources. The plan incorporates and complies with the principles and requirements found in State and federal laws, regulations, and guidelines. It is intended to be used in conjunction with applicable local emergency operations plans and continuity plans and incorporates the California State Emergency Plan (SEP) and Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG) 101 version 3.0. It is designed to conform to the requirements of California's Standardized Emergency Management System (SEMS) as defined in Government Code Section 8607(a) and the National Incident Management System (NIMS). Following SEMS/NIMS guidance, this plan incorporates the use of the Incident Command System (ICS), mutual aid, the

Operational Area (OA) concept, and multi-agency and interagency coordination. It is designed to be read, understood, and tested prior to an emergency.[19]

Wildland Fire Hazard

The California Department of Forestry and Fire Protection (CAL FIRE) designates the project site as a Local Responsibility Area (LRA).[20] There are no wildlands located within or adjacent to the project site.

The project site is located within the Northern Sacramento Valley and is relatively flat. The BYSP Area, within the project site, is largely vacant and consists of abandoned structures and roadways with the exception of an RV storage facility that is currently leasing an existing warehouse in the northern portion of the BYSP Area. The off-site improvement area south of the BYSP Area is largely cleared and undeveloped, with areas of remnant almond orchard. The project site is surrounded by irrigated agricultural lands and rural residences to the west and south, a residential community to the north, and a mix of residential and commercial uses to the east. The Southern Cascade/Sierra Nevada foothills to the east of the City provide the nearest area where large expanses of undeveloped lands occur. Areas of the City most vulnerable to wildfires are on the eastern side of the City adjacent to the foothills.[21]

3.9.3 - Regulatory Framework

Federal

Toxic Substances Control Act

Established in 1976 and amended on December 31, 2002, the Toxic Substances Control Act (TSCA) (15 United States Code [USC] §§ 2601–2692) grants the EPA power to require proper reporting, record keeping, and testing requirements related to chemical substances and/or mixtures. Specifically, the TSCA addresses the production, importation, use, and disposal of specific chemicals, including PCBs, asbestos, radon, and LBP. The TSCA establishes the EPA's authority to require the notification of the use of chemicals, require testing, maintain a TSCA inventory, and require those importing chemicals under Sections 12(b) and 13 to comply with certification and/or other reporting requirements. This federal legislation also phased out the use of ACM in new building materials and sets requirements for the use, handling, and disposal of ACM. Disposal standards for LBP wastes are also detailed in the TSCA.

Occupational Health and Safety Act

The Occupational Safety and Health Administration (OSHA) of the United States Department of Labor is responsible for implementing and enforcing federal laws and regulations that address worker health and safety. OSHA requires specific training for hazardous materials users and handlers, provision of information (procedures for personal safety, hazardous materials storage and handling, and emergency response) to employees who may be exposed to hazardous materials, and

[19] Butte County. 2022. Emergency Operations Plan. April.
[20] California Department of Forestry and Fire Protection (CAL FIRE). 2008. Fire Hazard Severity Zones in LRA. Website: https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed December 11, 2024.
[21] Butte County. 2024. 2024 Local Hazard Mitigation Plan Update. September.

acquisition of material safety data sheets from materials manufacturers. Material safety data sheets describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures. Construction workers and operational employees at the project site would be subject to these requirements.

Code of Federal Regulations, Titles 29 and 40

Regulations in Code of Federal Regulations Title 29 include requirements to manage and control exposure to LBP and ACM. In California, these requirements are implemented by the California Occupational Safety and Health Administration (Cal/OSHA) under California Code of Regulations Title 8 (see further discussion of California Code of Regulations Title 8 below). The removal and handling of ACM is governed primarily by EPA regulations under Code of Federal Regulations Title 40. The regulations require that the appropriate State agency be notified before any demolition, or before any renovations, of buildings that could contain asbestos or ACM above a specified threshold.

Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act

The EPA is responsible for implementing and enforcing federal laws and regulations pertaining to hazardous materials. The primary legislation includes RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Emergency Planning and Community Right-to-Know Act (known as SARA Title III). RCRA and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and nonhazardous wastes and mandate that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment, including detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities. As permitted by RCRA, in 1992, the EPA approved California's program called the Hazardous Waste Control Law (HWCL), administered by DTSC, to regulate hazardous wastes in California, as discussed further below. The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat, and the Hazard Ranking System is used to determine whether a site should be placed on the NPL for cleanup activities. SARA relates primarily to emergency management of accidental releases and requires annual reporting of continuous emissions and accidental releases of specified compounds that are compiled into a nationwide Toxics Release Inventory. Finally, SARA Title III requires formation of State and local emergency planning committees that are responsible for collecting material handling and transportation data for use as a basis for planning and provision of chemical inventory data to the community at large under the "right-to-know" provision of the law.

Hazardous Materials Transportation Act

Under the Hazardous Materials Transportation Act of 1975, the United States Department of Transportation (USDOT), Office of Hazardous Materials Safety regulates the transportation of hazardous materials on water, rail, highways, through air, or in pipelines, and enforces guidelines created to protect human health and the environment and reduce potential impacts by creating hazardous material packaging and transportation requirements. It also includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation. The

USDOT provides hazardous materials safety training programs and supervises activities involving hazardous materials. In addition, the USDOT develops and recommends regulations governing the multimodal transportation of hazardous materials.

Aboveground Petroleum Storage Act, and Spill Prevention, Control, and Countermeasure Rule

The Aboveground Petroleum Storage Act of 1990, and the Spill Prevention, Control, and Countermeasure (SPCC) Rule (amended 2010) of the Oil Pollution Prevention regulation (40 CFR 112) require the owner or operator of a tank facility with an aggregate storage capacity greater than 1,320 gallons to notify the local Certified Unified Program Agency (CUPA) and prepare an SPCC plan. The SPCC plan must identify appropriate spill containment measures and equipment for diverting spills from sensitive areas and must discuss facility-specific requirements for the storage system, inspections, record keeping, security, and training.

Clean Water Act

The Clean Water Act (CWA) (Title 33 § 1251 *et seq.* of the United States Code [33 USC 1251, *et seq.*]) is the major federal legislation governing water quality. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater). The objective of the act is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States. Responsibility for administering the CWA resides with the State Water Board and nine Regional Water Quality Control Boards (RWQCBs); the Central Valley RWQCB administers the CWA for Butte County. Section 404 of the CWA regulates temporary and permanent fill and disturbance of waters of the United States, including wetlands. The United States Army Corps of Engineers (USACE) requires that a permit be obtained if a project proposes to place fill in navigable waters and/or to alter waters of the United States below the ordinary high-water mark in non-tidal waters. Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Compliance with the water quality standards required under Section 401 is a condition for issuance of a Section 404 permit. Under Section 401 of the CWA, every applicant for a permit or license for any activity that may result in a discharge to a water body must obtain a State water quality certification from the RWQCB to demonstrate that the proposed activity would comply with State water quality standards.

State

California Hazardous Waste Control Law

The HWCL is the primary hazardous waste statute in the State of California and implements RCRA as a "cradle-to-grave" waste management system for handling hazardous wastes in a manner that protects human health and the environment and would reduce potential resulting impacts. The law specifies that generators have the primary duty to determine whether their waste is hazardous and to ensure proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous waste used or reused as raw materials. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of waste and waste management activities that are not covered by federal law.

California Health and Safety Code

The California Health and Safety Code (HSC § 25141) defines hazardous waste as a waste or combination of waste that may:

> . . . because of its quantity, concentration, or physical, chemical, or infection characteristics:
>
> (1) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness.
>
> (2) Pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed.

These regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous waste that commonly would be disposed of in landfills.

Under both the RCRA and the HWCL, hazardous waste manifests must be retained by the generator for a minimum of 3 years. The generator must match copies of the manifests with copies of manifest receipts from the treatment, disposal, or recycling facility.

In accordance with Chapter 6.11 of the California Health and Safety Code (HSC § 25404, *et seq.*), local regulatory agencies enforce many federal and State regulatory programs through the CUPA Program, including:

- Hazardous Materials Business Plans (HMBPs) (HSC § 25501, *et seq*.).
- State Uniform Fire Code (UFC) requirements (UFC § 80.103, as adopted by the State Fire Marshal pursuant to HSC § 13143.9).
- USTs (HSC § 25280, *et seq*.).
- Aboveground storage tanks (HSC § 25270.5(c)).
- HWG requirements (HSC § 25100, *et seq*.).

The Butte County Public Health Department's CUPA is responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of and inspects businesses that:

- Handle or store hazardous materials;
- Generate and/or treat hazardous waste;
- Own or operate USTs;
- Store petroleum in aboveground tanks over State thresholds;
- Store Federal regulated hazardous materials over State thresholds.

Inspections determine compliance with the California Health and Safety Code, California Code of Regulations, and the Code of Federal Regulations. The CUPA Program achieves compliance through education, community and industry outreach, inspections and enforcement.[22]

California Code of Regulations, Title 8

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. These regulations concern the use of hazardous materials in the workplace, including requirements for employee safety training; availability of safety equipment; accident and illness prevention programs; hazardous substance exposure warnings; and preparation of emergency action and fire prevention plans.

Cal/OSHA also enforces hazard communication program regulations, including procedures for identifying and labeling hazardous substances, and requires that safety data sheets (formerly known as material safety data sheets) be available for employee information and training programs. Cal/OSHA standards are generally more stringent than federal regulations. Construction workers and operational employees at the project site would be subject to these requirements.

California Code of Regulations, Title 8, Section 1529 authorizes Cal/OSHA to implement the survey requirements of Code of Federal Regulations Title 29 relating to asbestos. These federal and State regulations require facilities to take all necessary precautions to protect employees and the public from exposure to asbestos. Workers who conduct asbestos abatement must be trained in accordance with federal and State OSHA requirements. The Butte County Air Quality Management District (BCAQMD) oversees the removal of regulated ACM via the BCAQMD Rule 270.

California Code of Regulations, Title 8, Section 1532.1 includes requirements to manage and control exposure to LBP. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, monitoring, and compliance to ensure the safety of construction workers exposed to lead-based material. Loose and peeling LBP must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable hazardous waste thresholds. Federal and State OSHA regulations require a supervisor who is certified with respect to identifying existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities in areas where LBP may be present. Special protective measures and notification of Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures, where LBP is present.

California Code of Regulations Title 22, Division 4.5

California Code of Regulations, Title 22, Division 4.5, contains the Environmental Health Standards for the Management of Hazardous Waste, which includes California waste identification and classification regulations. California Code of Regulations, Title 22, Chapter 11, Article 3, “Soluble Threshold Limits Concentrations/Total Threshold Limits Concentration Regulatory Limits,” identifies the concentrations

[22] Butte County. 2024. Public Health Hazmat (CUPA). Website: https://www.buttecounty.net/816/Hazmat-CUPA. Accessed December 11, 2024.

at which soil is determined to be a California hazardous waste. California's Universal Waste Rule (22 California Code of Regulations [CCR] § 66273) provides an alternative set of management standards in lieu of regulation as hazardous wastes for certain common hazardous wastes, as defined in California Code of Regulations, Title 22, Section 66261.9. Universal wastes include fluorescent lamps, mercury thermostats, and other mercury-containing equipment. Existing structures may contain fluorescent light ballasts that could contain mercury or lead. The Alternative Management Standards for Treated Wood Waste (22 CCR § 67386) were developed by the DTSC to allow for disposal of treated wood as a nonhazardous waste, to simplify and facilitate the safe and economical disposal of such waste. Chemically treated wood can contain elevated levels of hazardous chemicals (e.g., arsenic, chromium, copper, pentachlorophenol, or creosote) that equal or exceed applicable hazardous waste thresholds. The Alternative Management Standards provide for less stringent storage requirements and extended accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler, and allow disposal at specific nonhazardous waste landfills.

Porter-Cologne Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans (also known as basin plans) for all areas of the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of State Water Board and RWQCBs to adopt and periodically update water quality control plans that recognize and reflect the differences in existing water quality, the beneficial uses of the region's groundwater and surface water, and local water quality conditions and problems. It also authorizes the State Water Board and RWQCBs to issue and enforce waste discharge requirements and to implement programs for controlling pollution in State waters. Finally, the Porter-Cologne Act also authorizes the State Water Board and RWQCBs to oversee site investigation and cleanup for unauthorized releases of pollutants to soils and groundwater and in some cases to surface waters or sediments.

California Emergency Response Plan

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies. Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the California Highway Patrol (CHP), CAL FIRE, California Department of Fish and Wildlife (CDFW), and California Department of Transportation (Caltrans).

California Department of Forestry and Fire Protection

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include No Fire Threat, Moderate, High, and Very High fire threat. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built

environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Code

The State of California provided a minimum standard for building design through the 2016 California Building Standard Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2016 CBC is based on the 2015 International Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors[23] on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC § 4442);
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428);
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431).

Regional

Local

Chico General Plan

The General Plan includes the following goals, actions, and policies related to hazards and hazardous materials:

[23] A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

Safety Element

Goal S-4 Continue to provide effective and efficient fire protection and prevention services to Chico area residents.

Action S-4.2.1 Strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency response calls in urbanized areas.

Policy S-4.3 Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.

Action S-4.3.3 As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.

Goal S-8 Reduce the potential for public exposure to hazardous materials or the accidental releases of toxic or hazardous substances.

Open Space and Environment Element

Action OS-3.2.4 Monitor the status of known groundwater and soil contamination sites within the Planning Area as identified by the California Department of Toxic Substances Control and the Regional Water Quality Control Board

City of Chico Municipal Code

Chapter 16.42 of the Municipal Code outlines regulation standards related to safeguarding life and property from the hazards of fire and explosion arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or structures.

3.9.4 - Thresholds of Significance

The lead agency utilizes the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working the project area?

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires?

3.9.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

Routine Transport, Use, or Disposal of Hazardous Materials

Impact HAZ-1:	**The proposed project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

Impact Analysis

Development of the proposed project would involve removal of three smaller on-site existing structures while the Warehouse, Engineering Building and Shop would be maintained for potential reuse. Development would also consist of vegetation removal, grading, installation of utilities, building construction, and paving. Construction activities would entail the use of heavy equipment on the project site. Potential hazardous materials transported, used, or disposed of during project construction would be limited to commonly used substances such as gasoline, diesel, oil, grease, mechanical fluids, paints, and cleaning solvents. Construction equipment would be serviced by trained technicians and potentially hazardous materials would be stored in secure facilities. Furthermore, the safe handling of these commonly used substances is governed by occupational health and safety laws and regulations and construction contract requirements. Therefore, the use of this equipment and these substances during construction would not present any undue risks to the public or the environment.

As discussed above, to minimize the effects of elevated levels of VOCs, lead, and arsenic on the project site, the site-specific Phase I ESA recommended that the soil gas and VOC concentrations and screening results be evaluated in the context of specific development plans at this location and in consultation with DTSC, who will confirm the final screening value. As such, the Phase II ESA identified the presence of VOCs, including PCE, trimethylpentane, ethanol, freon 11, and hexane. The presence of these materials could adversely impact the health of residents of the proposed projects due to exposure. However, subsequent testing within the Phase II ESA found that all VOCs were found to be below ESLs, and all samples were below RSLs, except for one. PCE was found at a

depth of 15 feet that slightly exceeded the RSL (11 micrograms per cubic meter [µg/m^3]) but was below the residential ESL (15 µg/m^3).

Additionally, the Phase II ESA found elevated levels of lead and arsenic within and extending slightly beyond the assumed limits of the Normal Avenue Dump/Burn Area (0–0.5 feet below ground surface) and South Orchard Dump/Burn Area (up to 2.5 feet below ground surface). In response, the Phase II ESA recommended a waste soils mitigation effort be undertaken in these former burn dump areas, under a planned DTSC Standard Agreement. This mitigation effort would be performed to specifically identify and remove residual waste soil containing elevated levels of arsenic and lead prior to project site redevelopment. The focused screening effort could be accomplished using field-level devices such as an x-ray fluorescence (XRF) spectrometer and carefully mapped field grids. This field screening activity could minimize the potential for over-excavation work, which would also reduce the potential for fugitive dust generation and drift. The XRF screening would be performed as described in a DTSC-approved Soil and Debris Management Plan (SDMP), which provides details of the soil and ash debris screening. This screening activity would allow site managers to plan for the necessary equipment and transportation bins needed to conduct excavation work, confirmation soil sampling, and the appropriate off-site disposal of chemically impacted soil, ash, and debris. This recommendation is reflected in Mitigation Measure (MM) HAZ-1 which requires an SDMP. An SDMP is a document that outlines how to manage soil and debris during construction or remediation projects and provides guidelines for sites with potential contamination issues.

Finally, the Phase II ESA identified the presence of active and abandoned utility lines and possible anomalies that may represent buried infrastructure and USTs. No visual evidence of hazardous materials contamination was observed, and soil gas sampling confirmed there was no evidence of a historic hydrocarbon release. However, the Phase II ESA recommended exploratory excavation and the implementation of an SDMP in order to document the project site characterization according to the nature and extent of contamination that is present on the project site, as well as to validate applicable screening levels before local development activities proceed. This recommendation is also reflected in MM HAZ-1. The implementation of this mitigation measure would reduce impacts to a level of less than significant.

Construction of the proposed project would include removal of on-site structures that, due to their age, may include lead and/or ACMs requiring disposal. However, implementation of applicable laws and regulations regarding these materials, including but not limited to, the TSCA, the California Code of Regulations, Cal/OSHA, and BCAQMD would ensure related potential impacts would be less than significant.

Operation

The proposed project would result in the implementation of development contemplated in the BYSP, which would result in a mixed-use community accommodating a diverse range of housing opportunities with a mix of commercial, recreational and office uses located throughout. Aside from the use and storage of common household chemicals (e.g., cleaning agents, small quantities of petroleum products, etc.), the proposed uses would not handle, store, or use substantial quantities of hazardous materials that could potentially cause a release that endangers human health or the environment. Furthermore, the proposed project would be compliant with Chapter 16.42 of the

Municipal Code, which outlines regulation standards related to safeguarding life and property from the hazards of fire and explosion arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or structures. Impacts would be less than significant in this regard.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM HAZ-1 Prior to issuance of the first grading permit for the proposed project, the developer shall retain a qualified hazardous materials consultant to prepare a Soil and Debris Management Plan (SDMP) which will identify specific construction measures to be implemented at the project site. The SDMP shall include site control measures, excavation and backfill procedures, confirmation of sampling procedures and screening levels, dust control measures, stormwater protection measures, waste soil handling and disposal procedures, and a debris management plan in accordance with applicable local, State, and federal regulations. The SDMP shall identify contingency procedures to be followed in the event that subsurface structures (e.g., vaults or tanks) are encountered during excavation or other unanticipated discoveries are made. The SDMP shall also specify any special procedures for addressing issues in proximity to the asphalt cap and groundwater monitoring well network which are to remain in place according to the Land Use Covenant (LUC) for the project site. The developer shall submit the SDMP and all of its components to the California Department of Toxic Substances Control (DTSC) for review and approval and shall provide copies of the DTSC-approved SDMP to the City to comply with this mitigation measure, prior to initiating project site improvements.

Level of Significance After Mitigation

Less than significant impact.

Risk of Upset

Impact HAZ-2: The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Impact Analysis

The project site is currently under an LUC, which restricts the use of all groundwater on the project site in coordination with DTSC. In 1999, Louisiana-Pacific signed a long-term Operation and Maintenance Agreement with DTSC and a deed restriction was placed on the property to restrict the use of the asphalt cap area to industrial or commercial and to prohibit the removal of groundwater from the property. In a review of the on-site remedial actions required to be performed every 5 years, Louisiana-Pacific concluded that remediation activities are performing as designed and continue to protect human health and the environment. The recommendations in the report include

continued groundwater sampling and maintenance of the asphalt cap, and to maintain the deed restriction prohibiting the use of groundwater without DTSC approval.

As discussed above under Impact HAZ-1, the proposed project would include the use and storage of hazardous materials during construction and operation activities. Also discussed above, the proposed project would be subject to several federal, State, and local laws that regulate the use and storage of hazardous materials (summarized in Section 3.8.3, Regulatory Framework). Additionally, as defined by MM HAZ-1, the project applicant would be required to prepare an SDMP which would ensure on-site actions properly handle existing contaminated soils and materials in accordance with applicable screening levels. The proposed project would also include the preparation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the City's National Pollutant Discharge Elimination System (NPDES) permit which would further protect against release of hazardous materials.

Compliance with the required Mitigation Measures MM HAZ-1, as well as all applicable federal, State, and local laws and regulations would reduce the potential impacts associated with an accidental release of hazardous materials at the project site. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM HAZ-1.

Level of Significance After Mitigation

Less than significant impact.

Hazardous Emissions Proximate to a School

Impact HAZ-3:	**The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

Impact Analysis

The project site is within 0.25 mile of three schools. The project site is approximately 95 feet southeast of Little Sprouts Preschool and approximately 182 feet south of Mi Escuelita Maya. WaterSprites Swim School is approximately 200 feet to the southeast. However, as previously discussed in Impact HAZ-1, operation of the proposed residential and commercial uses would not handle, store, or use substantial quantities of hazardous materials that could potentially cause a release that endangers human health or the environment. Implementation of MM HAZ-1 would ensure that existing hazardous materials on-site would be properly handled and disposed of prior to and during construction. Impacts would be less than significant with mitigation.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM HAZ-1.

Level of Significance After Mitigation

Less than significant impact.

Government Code Section 65962.5 Sites

Impact HAZ-4: **The proposed project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.**

Impact Analysis

The project site is listed on the DTSC EnviroStor database as a Certified State Response Cleanup Site because of past and current operations at the project site that have resulted in soil and groundwater contamination. Additionally, the project site is listed on the California State Water Board's Geotracker database as a LUST Cleanup Site and a Cleanup Project Site with open verification monitoring. The details of remediation performed thus far at the project site are detailed above in Section 3.9.2, Environmental Setting.

Several groundwater monitoring wells are located on-site and must remain operational. Implementation of MM HAZ-1 requires that the SDMP prepared for the project site specify that such wells remain in place according to the LUC. In the event that a monitoring well requires relocation, such action would be required to be coordinated with the DTSC or other relevant regulatory authority. As such, on-site groundwater monitoring would continue as necessary.

The Phase II ESA completed in January 2024 concluded that no TPH-MO or pesticides (4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and dieldrin) were found in concentrations exceeding SSLs. Additionally, no PAHs were identified in soil samples taken from the project site. The soil gas investigation conducted in November 2022 did not identify VOCs at concentrations exceeding conservative soil gas ESLs, and only one sample slightly exceeded the USEPA RSL for PCE. Anomalies were identified along the southwestern BYSP Area boundary that could represent buried infrastructure or debris which could pose a concern during development of the BYSP Area.

As there is residual contamination in the soil and groundwater at the project site, excavation and development at the project site could result in construction personnel being exposed to hazardous materials. This would present a potentially significant impact. Implementation of MM HAZ-1 would require that an SDMP is prepared and implemented prior to the issuance of a grading permit. The SDMP would ensure that applicable regulations are implemented to avoid exposure to hazardous materials.

Implementation of MM HAZ-1, as well as compliance with applicable federal, State, and local laws and regulations, would reduce the potential impacts associated with the project site being listed as a hazardous materials site. Impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Implement MM HAZ-1.

Level of Significance After Mitigation

Less than significant impact.

Emergency Response and Evacuation

Impact HAZ-5:	**The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

Impact Analysis

The BYSP would include direct roadway connections to Ivy Street and 16th Street as primary emergency access routes. Three potential secondary emergency access locations would be provided in and out of the proposed project site by way of the secondary streets of 14th Street, 18th Street, 20th Street, and a new connection to Estes Road. These roadway connections would provide adequate emergency ingress and egress to the proposed project site.

An impact could occur related to the physical interference with an emergency evacuation plan if a project's additional traffic would significantly delay or inhibit overall evacuation of an area. As described in Chapter 17, *Transportation,* the project's vehicular traffic would not significantly delay an emergency evacuation because evacuation notices are typically given with as much notice as possible and prevent, to the extent feasible, evacuation trips from all occurring at once. Therefore, the proposed project would not represent a significant potential to interfere with evacuation. Impacts would be less than significant.

Level of Significance

Less than significant impact.

Wildland Fires

Impact HAZ-6:	**The proposed project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.**

Impact Analysis

The project site is not located within a Moderate, High, or Very High Fire Hazard Safety Zone (FHSZ). According to CAL FIRE, the project area is located within an LRA. There are no wildlands located within or adjacent to the project area. The nearest FHSZ is approximately 3 miles to the northeast.

For an expanded discussion regarding wildfire, see Section 3.18, Wildfire, of this Draft EIR.

The project site is located within the Northern Sacramento Valley and is relatively flat. An internal street network with multiple connections to existing streets that would accommodate emergency

ingress and egress. The BYSP Area is largely vacant, with the exception of an RV storage facility an existing warehouse in the northern portion of the BYSP Area and several abandoned structures and roadways. The off-site improvement area south of the BYSP Area is largely cleared and undeveloped, with areas of remnant almond orchard. The project site is surrounded by irrigated agricultural lands and rural residences to the west and south, a residential community to the north, and a mix of residential and commercial uses to the east. No wildlands are located in close proximity to the project site. The proposed project would be required to comply with applicable provisions of the California Public Resources Code and the CBC with regard to fire safety design measures, construction measures, and plan check requirements. Furthermore, the City of Chico has an emergency response plan in place in preparation for effective protection, including the project area, in compliance with the State of California Emergency Operations Plan. For these reasons, the proposed project would not be exposed to undue wildland fire risks. Impacts would be less than significant.

Level of Significance

Less than significant impact.

3.9.6 - Cumulative Impacts

For most topics, the geographic scope of the cumulative hazards and hazardous materials analysis is the project area. Adverse effects of hazards and hazardous materials tend to be localized; therefore, the area near the project area would be most affected by project activities. For the transport of hazardous materials, the geographic scope includes local and regional transportation facilities.

Other past, present, and reasonably foreseeable projects have been and would continue to be required to comply with applicable federal, State, and local regulatory requirements regarding the transport of hazardous materials, cleanup of hazardous materials, and the use and storage of hazardous materials during construction and operation. Additionally, hazardous material impacts tend to be localized to individual project sites. Consequently, no significant cumulative impacts would occur.

Moreover, the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact. The proposed project would not result in any significant impacts associated with the routine transport, use, or disposal of hazardous materials because any use or storage of hazardous materials during construction or operations would be subject to compliance with regulatory requirements. The project site is listed on the Cortese List. However, while the project site likely contains contaminated soils, asbestos, and lead, implementation of applicable federal, State, and local regulations as well as mitigation herein would ensure impacts are reduced to less than significant.

The proposed project is located in northern Sacramento Valley in a relatively flat area. An internal street network with multiple connections to existing streets would accommodate emergency ingress and egress. The nearest FHSZ is approximately 3 miles to the northeast. Additionally cumulative projects would be required to comply with applicable provisions of the California Public Resources Code and the CBC with regard to fire safety design measures, construction measures, and plan check

requirements. Therefore, cumulative impacts related to wildfire hazards would be less than significant. Moreover, the proposed project would not have a cumulatively considerable contribution to the less than significant impacts. The project site is not within a Moderate, High, or Very High FHSZ and is not located near wildlands. Consequently, no significant cumulative impacts related to emergency response, evacuation, or wildfire hazards would occur.

Therefore, the proposed project, in conjunction with other past, approved, and reasonably foreseeable future projects, would not have a cumulatively significant impact related to hazards and hazardous materials.

Level of Cumulative Significance

Less than significant impact.

3.10 - Hydrology and Water Quality

3.10.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from project implementation on the project site (including the BYSP Area and off-site improvement area) and its surrounding area. Descriptions and analysis in this section are based, in part, on information provided by the Central Valley Regional Water Quality Control Board (Central Valley RWQCB), Federal Emergency Management Agency (FEMA), and the California Department of Water Resources (DWR).

The following public comments were received related to the proposed project's potential hydrologic impacts:

- Request for details and analysis regarding the presence/absence of any jurisdictional features (i.e., waters of the United States and/or State), requirements related to any proposed discharge of dredged or fill material and regulatory mandates for same, general permit for stormwater discharges associated with construction and land disturbance activities, the presence/absence of any isolated wetlands and other waters not covered by the Federal Clean Water Act and regulatory requirements for same, pre- and post-construction stormwater requirements, implications of contaminated site cleanup cases, and land use covenants and active groundwater monitoring wells throughout the property.
- Question of whether there is enough water to serve the proposed residential units.
- Inquiry about water storage on-site to capture water from wet years in preparation of dry years.
- Suggestion to use reclaimed water for the project.
- Questions about the impact of the proposed project on groundwater, compliance with the model water efficient landscape ordinance, low water use plantings, and any opportunities to capture grey water and on-site runoff to irrigate landscaping.
- Requests that any changes to drainage and water quality within, upstream, or downstream of the project site be analyzed and addressed.
- Concerns related to water usage and the impact on water aquifer and related facilities.

3.10.2 - Environmental Setting

Regional Hydrology

The City of Chico (City) is located in the Sacramento River Valley and is approximately 10 miles east of the Sacramento River. The Sacramento River flows in a south/southeasterly direction through the Sacramento River Valley. The Sacramento River is more than 400 miles long, stretching from Mount Shasta through the Sacramento Valley to the San Francisco Bay. Its major tributaries include the Pit, Feather, Yuba, and American rivers.[1] The City is located in the north central portion of the

[1] Sacramento Regional County Sanitation District (Regional San). 2022. Sacramento's Watershed. Website: https://www.regionalsan.com/sacramentos-watershed. Accessed October 3, 2024.

Sacramento River Hydrologic Region, which covers approximately 27,200 square miles. Geographically, the Sacramento River Hydrologic Region extends south from the Modoc Plateau near the Oregon border to the Sacramento-San Joaquin River Delta.[2] The City is made up of the Big Chico Creek watershed and the Little Chico Creek/Butte Creek watershed.

Surface Water Quality

City of Chico

The City is located within the Central Valley Hydrologic Basin Planning Area under the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB Basin Plan outlines the beneficial water uses that the California State Water Resources Control Board (State Water Board) will protect, water quality objectives, and strategies for achieving these objectives. The State of California requires small communities to implement development standards to protect water quality under the General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) Order No. "2013-0001-DWQ" (MS4 Permit). On February 5, 2013, the second Phase II Small MS4 General Permit was adopted and became effective on July 1, 2013. The City developed a Post-Construction Standards Plan to meet the MS4 permit requirement.[3]

Project Site

No bodies of water under the jurisdiction of the Central Valley RWQCB are located within the project site. However, Comanche Creek is located approximately 0.3 mile south of the BYSP Area (directly adjacent to the off-site improvement area), Little Chico Creek is located approximately 0.4 mile north of the BYSP Area, and Big Chico Creek is located approximately 0.9 mile north of the BYSP Area. Section 303(d) of the Clean Water Act (CWA) requires the identification of waterbodies that do not meet, or are not expected to meet, water quality standards. All waterways within the City, including the aforementioned, flow to the Sacramento River, which is on the 303(d) list for mercury, polychlorinated biphenyls (PCB), dichlorodiphenyltrichloroethane (DDT), and dieldrin.[4] Big Chico Creek is listed on the State Water Board 303(d) list due to the presence of mercury. Comanche Creek is not listed on State Water Board 303(d) list.[5]

Stormwater Runoff

Though previously developed, the project site is generally clear of existing storm drainage features except for some minor culverts and low swales that convey some surface runoff to the southwest corner toward a small retention basin. However, it is noted that this basin has likely been non-functional for numerous years due to the primarily vacant nature of the project site.

Most of the rainwater that falls on the project site is infiltrated on-site, with only rainwater from large storm events leaving the site via surface flow along the site's southern edge. Surface water is

[2] City of Chico, 2010. City of Chico General Plan Environmental Impact Report. Hydrology and Water Quality. September.
[3] City of Chico. No Date. Storm Water Management. Website: https://chico.ca.us/documents/Departments/Public-Works/SewerStorm-Drain-Engineering/Storm-Water-Management/postconstructionstandardsplan3-15-17.pdf. Accessed October 3, 2024.
[4] California State Water Resources Control Board (State Water Board). 2018. California 2018 Integrated Report. Website: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=e2def63ccef54eedbee4ad726ab1552c. Accessed December 15, 2024.
[5] Ibid.

collected in an existing off-site drainage ditch along the BYSP Area's southern boundary that drains a large culvert under the Union Pacific Railroad (UPRR) tracks.

Groundwater

Vina Subbasin

Chico is located within the Vina Subbasin of the Sacramento Valley Groundwater Basin. The Vina Subbasin was created in 2018 via a basin modification request. The Subbasin is identified by the DWR as being a high priority subbasin and is managed by two Groundwater Sustainability Agencies (GSA): the Vina GSA and the Rock Creek Reclamation District GSA.[6]

Continental sediments of the Tehama, Tuscan, and Laguna Formation compose the major fresh groundwater-bearing formations in the Sacramento Valley Groundwater Basin with the Tuscan Formation and, to a lesser degree, the Tehama Formation composing the major fresh groundwater-bearing formations in the Vina Subbasin. Groundwater flows from the north toward the southwestern corner of the subbasin. While groundwater elevations are lower in the fall than spring, the general direction and gradient of flow are similar during both periods. The Sacramento River borders the Vina Subbasin on its western side and flows from north to south. The larger surface water bodies generally flow from east to west toward the Sacramento River and include Big Chico Creek and Butte Creek.[7]

Groundwater Levels, Storage and Budget

As indicated by the Groundwater Sustainability Plan for the Vina Groundwater Subbasin, groundwater levels exhibit a 4- to 7-year cycle consistent with variations in water year type but groundwater levels during more recent dry-year cycles are lower than groundwater levels in earlier dry-year cycles. Groundwater storage is relatively stable and total fresh groundwater in storage is estimated at over 16 million acre-feet. The amount of groundwater storage has decreased by approximately 0.07 percent per year between 2000 and 2018. As such, volume of groundwater storage does not pose a concern but depth to access groundwater may increase. The estimated sustainable yield for the Vina Subbasin is 233,000 acre-feet per year.[8]

Project Site

As described in Chapter 2, Project Description, the California Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment Determination for the BYSP Area, identifying elevated concentrations of arsenic in soils and pentachlorophenol (PCP) in groundwater, related to the past industrial uses of the BYSP Area and the adjacent railroad. According to the Phase I Environmental Site Assessment (Phase I ESA) prepared for the proposed project, the BYSP Area is currently being monitored for on-site PCP groundwater contamination. A number of groundwater monitoring wells are located within the BYSP Area. As such, a deed restriction is in place which prohibits the use of groundwater without approval from the DTSC. Furthermore, the Phase I ESA found that an off-site trichloroethylene (TCE) groundwater plume, originating from the former Victor

[6] Vina and Rock Creek Reclamation District Groundwater Sustainability Agencies. 2021. Vina Groundwater Subbasin Groundwater Sustainability Plan. December.
[7] Ibid.
[8] Ibid.

Industries facility northeast of the BYSP Area at 395 East 20th Street, extends below the southern section of the BYSP Area. According to the Victor Industries November 2021 Semi-Annual Groundwater Monitoring Report, TCE contaminates were first detected in October 1984 and continue to be present in the groundwater extended below the BYSP Area.[9] Based on on-site well data, groundwater levels are estimated to be approximately 125 to 129 feet above mean sea level in the southwestern portion of the BYSP Area.[10]

Flooding and Inundation

Flood Hazard Zones

Flood zones are determined by FEMA and used to create Flood Insurance Rate Maps (FIRMs) that designate these zones. The most recent FIRMs for the City were updated on January 6, 2011. Most of the land within the City limits is included in Zone X, which indicates lands located outside of the 100-year floodplain. However, areas surrounding the creeks within the City are classified as special flood hazard areas.[11] When the Sacramento River reaches flood stage, water backs up into the creeks and tributaries which pass through the City and may delay runoff from entering the river. Inadequate channel capacity exacerbates the flooding potential near the Sacramento River. Flood control projects on Little Chico Creek, Big Chico Creek, and Lindo Channel have helped reduce the amount of runoff that flows through the City, reducing potential flooding problems. Flooding hazards within the Big Chico Creek watershed are attributed to potential high flows from Lindo Channel, Sycamore Creek, Rock Creek, Keefer Slough, and Big Chico Creek.[12]

Dam Failure Inundation

Larger dams that would inundate the City's planning area boundary in the event of a dam failure include the Shasta Dam (in Shasta County) on the Sacramento River, Whiskeytown Dam (in Shasta County) on Clear Creek, and Black Butte Dam (in Tehama County) on Stony Creek.[13] Within City limits, only a very small area in the northwestern portion is identified as part of the Shasta Dam inundation area.[14] Smaller dams in the vicinity include Paradise and Magalia reservoirs, located above Paradise to the east of Chico. Failure of Paradise Dam would overtop Magalia Dam and result in temporary flooding in the City along Butte Creek.[15]

Tsunami and Seiche Inundation

A seiche is a wave generated in a bay or lake, which is analogous to the back-and-forth sloshing of water in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, or landslides into the water. Tsunamis are large sea waves generated by earthquakes.

[9] Cameron-Cole. Phase I Environmental Site Assessment (Phase I ESA). Barber Yard. October 7, 2022.
[10] Cameron-Cole. Phase II Site Investigation Report. Barber Yard. January 2024.
[11] Federal Emergency Management Agency (FEMA). 2011. National Flood Hazard Layer Viewer. Website: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=e2def63ccef54eedbee4ad726ab1552c. Accessed October 3, 2024.
[12] City of Chico. 2010. City of Chico Draft Environmental Impact Report. September.
[13] Ibid.
[14] City of Chico. 2017. Chico 2030 General Plan, Safety Element. March.
[15] City of Chico. 2010. City of Chico Draft Environmental Impact Report. Hydrology and Water Quality. September.

These waves travel across the ocean at hundreds of miles an hour and can cause waves cresting tens of feet high. The City is not located in an area that would be affected by a seiche or tsunami.[16]

Project Site

According to the FEMA FIRM for the area, the project site is in an area designated as an Area of Minimal Flood Risk (Zone X).[17] The northern boundary of the BYSP Area is approximately 120 feet away from the FEMA-designated flood hazard zone (Zone AO) associated with Little Chico Creek. The area along Comanche Creek along the off-site improvement area's southern boundary is identified as within the 100-year flood plain (Zone AE).[18] The area is narrow, closely following the route of Comanche Creek (Exhibit 3.10-1).

[16] City of Chico. 2010. City of Chico Draft Environmental Impact Report. Hydrology and Water Quality. March.
[17] Federal Emergency Management Agency (FEMA). 2011. FEMA Flood Insurance Rate Map Panel 505 of 1200. Map Number: 06007C0505E. Effective date: January 6, 2011. National Flood Insurance Rate Program. Map. Scale 1:12,000.
[18] Ibid.

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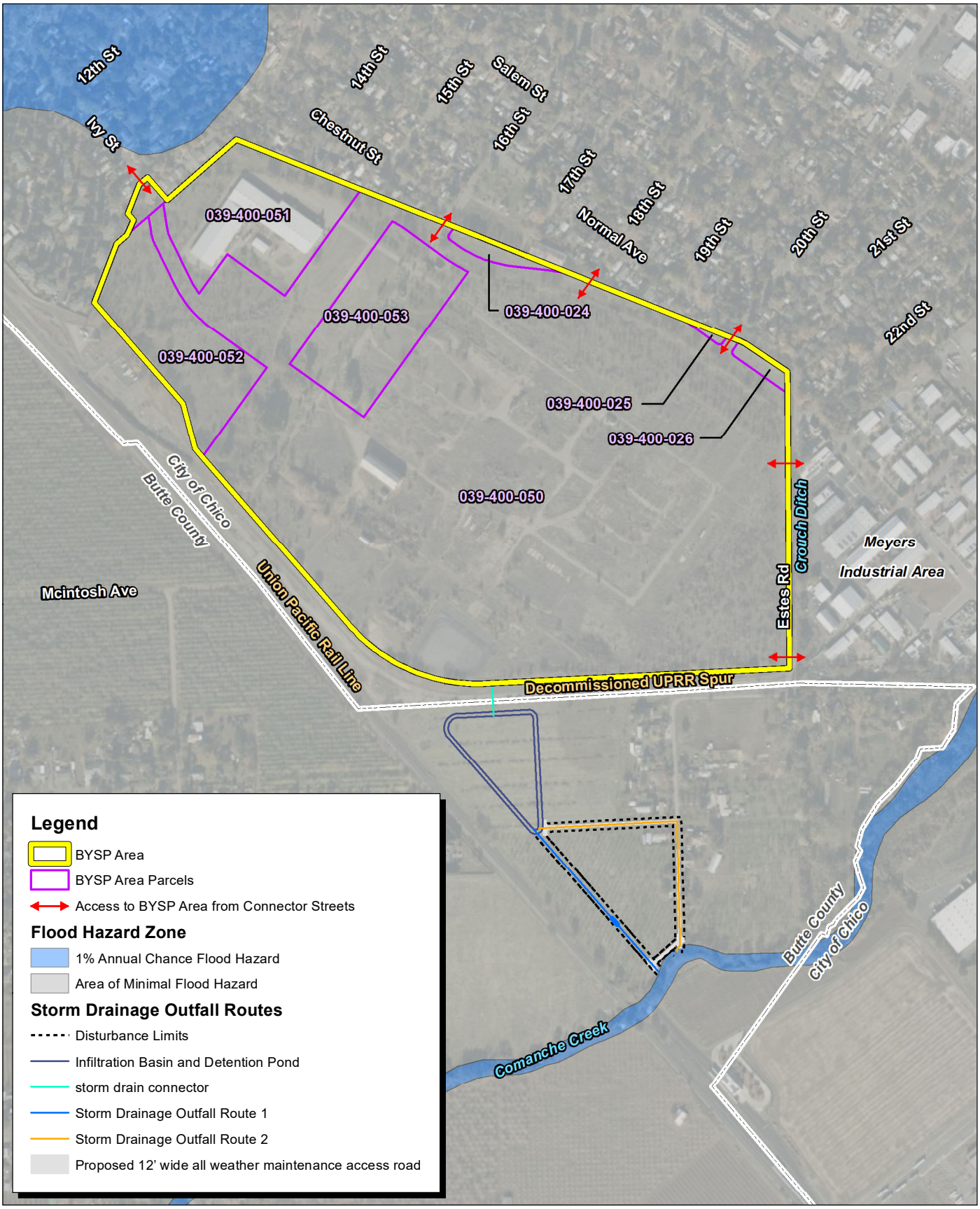

Source: Bing Aerial Imagery. Butte County Association of Governments; and NorthStar, 05/2023. National Flood Hazard Layer(NFHL) - FEMA

FIRSTCARBON SOLUTIONS™

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Feet

Exhibit 3.10-1
FEMA Flood Zones

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3.10.3 - Regulatory Framework

Federal

Clean Water Act

The CWA (33 United States Code [USC] § 1251, *et seq*.) is the major federal legislation governing the water quality aspects of construction and operation of the proposed project. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater) and waters of the State. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States.

The CWA authorizes the United States Environmental Protection Agency (EPA) to implement pollution control programs. Under the CWA, it is unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained. In addition, the CWA requires each state to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality objectives necessary to support those uses.

Responsibility for protecting water quality in California resides with the State Water Board and nine RWQCBs. The State Water Board establishes Statewide policies and regulations for the implementation of water quality control programs mandated by federal and State water quality statutes and regulations. The RWQCBs develop and implement water quality control plans (basin plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. Water quality standards applicable to the proposed project are listed in the Central Valley RWQCB Basin Plan.

Section 303—Water Quality Standards and Total Maximum Daily Loads

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body's designated beneficial use. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards.

CWA Section 303(d) requires states and authorized Native American Tribes to develop a list of water quality impaired segments of waterways. The list includes waters that do not meet water quality standards necessary to support a waterway's beneficial uses even after the minimum required levels of pollution control technology have been installed. Listed water bodies are to be priority ranked for development of a total maximum daily load (TMDL). A TMDL is a calculation of the total maximum daily load (amount) of a pollutant that a water body can receive on a daily basis and still safely meet water quality standards. The TMDLs include waste load allocations for urban stormwater runoff as well as municipal and industrial wastewater discharges, with allocations apportioned for individual

MS4s and wastewater treatment plants. For stormwater, load reductions would be required to meet the TMDL waste load allocations within the 20 years required by the TMDLs.

The State Water Board, RWQCBs, and EPA are responsible for establishing TMDL waste load allocations and incorporating approved TMDLs into water quality control plans, NPDES permits, and Waste Discharge Requirements (WDRs) in accordance with a specified schedule for completion.

Section 401—Water Quality Certification

Section 401 of the CWA requires compliance with State water quality standards for actions within State waters. Under CWA Section 401, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the State Water Board delegates authority to either grant water quality certification or waive the requirements to the nine RWQCBs. The Central Valley RWQCB is responsible for the project site.

Section 402—National Pollution Discharge Elimination System Permits

The RWQCBs administer the NPDES stormwater permitting program, under Section 402(d) of the federal CWA, on behalf of the EPA. The objective of the NPDES program is to control and reduce levels of pollutants in water bodies from discharges of municipal and industrial wastewater and stormwater runoff. CWA Section 402(d) establishes a framework for regulating nonpoint-source stormwater discharges (33 USC 1251). Under the CWA, discharges of pollutants to receiving water are prohibited unless the discharge complies with an NPDES permit. The NPDES permit specifies discharge prohibitions, effluent limitations, and other provisions, such as monitoring deemed necessary to protect water quality based on criteria specified in the National Toxics Rule (NTR), the California Toxics Rule (CTR), and the basin plan.

Discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to maintain public health and safety, protect receiving-water resources, and safeguard the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life. Under the NPDES permits issued to the City/County to operate the treatment plants, the City/County is required to implement a pretreatment program. This program must comply with the regulations incorporated in the CWA and the General Pretreatment Regulations (Code of Federal Regulations [CFR] Title 40, Part 403 [40 CFR 403]).

Section 404—Waters of the United States

Section 404 of the CWA regulates temporary and permanent fill and disturbance of wetlands and waters of the United States. Under Section 404, the discharge (temporary or permanent) of dredged or fill material into waters of the United States, including wetlands, typically must be authorized by the United States Army Corps of Engineers (USACE) through either the Nationwide Permit (general categories of discharges with minimal effects) or the Individual Permit.

River and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires that regulated activities conducted below the ordinary high-water elevation of navigable waters of the United States be approved and permitted by the USACE. Regulated activities include the placement or removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway. As of March 20, 2023, the Army Corps of Engineers, Department of Defense, and the EPA redefined waters of the United States as including traditional navigable waters, the territorial seas, interstate waters and their tributaries, related impoundments, related wetlands, and intrastate lakes and ponds, streams, or wetlands that meet either the relatively permanent standard or the significant nexus standard.[19] Section 10 also regulates tributaries and backwater areas that are associated with navigable waters of the United States and are located below the ordinary high-water elevation of the adjacent navigable waterway.

A project proponent can apply for a permit/letter of permission for work regulated under Section 404 (CWA) and Section 10 (Rivers and Harbors Act) by completing and submitting one application form. An application for a USACE permit will serve as an application for both Section 404 and Section 10 permits.

Federal Antidegradation Policy

The federal antidegradation policy is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a Statewide policy that includes the following primary provisions:

- Existing instream uses and the water quality necessary to protect those uses shall be maintained and protected.
- Where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the State finds that allowing lower water quality is necessary for important local economic or social development.
- Where high-quality waters constitute an outstanding national resource, such as waters of national and State parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Toxics Rule and California Toxics Rule

In 1992, the EPA promulgated the NTR under the CWA to establish numeric criteria for priority toxic pollutants for 14 states to bring all states into compliance with the requirements of CWA Section 303(c)(2)(B). The NTR established water quality standards for 42 pollutants not covered under California's Statewide water quality regulations at that time. As a result of the court-ordered revocation of California's Statewide basin plans in September 1994, the EPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, the EPA issued the

[19] US Army Corps of Engineers and Federal Environmental Protection Agency. 2023. Revised Definition of "Waters of the United States". Website: https://www.federalregister.gov/d/2022-28595. Accessed December 15, 2024.

CTR, which includes all the priority pollutants for which the EPA has issued numeric criteria not included in the NTR.

Executive Order 11988

Executive Order 11988, "Floodplain Management," directs all federal agencies to avoid, to the extent possible, long- and short-term adverse impacts of occupancy and modification of floodplains, and to avoid supporting development in a floodplain either directly or indirectly wherever there is a practicable alternative. Compliance requirements are outlined in 23 Code of Federal Regulations 650, Subpart A, "Location and Hydraulic Design of Encroachment on Floodplains."

If a project involves significant encroachment into the floodplain, the final environmental document must include:

- The reasons why the proposed action must be located in the floodplain,
- Alternatives considered and the reasons they were not practicable, and
- A statement indicating whether the action conforms to applicable State or local floodplain protection standards.

National Flood Insurance Act and Flood Disaster Protection Act

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were enacted to reduce the need for flood protection structures and limit disaster relief costs by restricting development in floodplains. FEMA, established in 1979, is responsible for predicting hazards from flooding events and forecasting the level of inundation under various conditions. As part of its duty to develop standards for delineating fluvial and coastal floodplains, FEMA provides information on FIRMs about the potential for flood hazards and inundation and, where appropriate, designates regions as special flood hazard areas. Special flood hazard areas are defined as areas that have a 1 percent chance of flooding in a given year.

FEMA also administers the National Flood Insurance Program (NFIP), a federal program that enables property owners in participating communities to purchase insurance as protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt basin plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the State Water Board and RWQCBs to adopt and periodically update basin plans. The Central Valley RWQCB is responsible for the project site.

Basin plans are the regional water quality control plans required by both the CWA and the Porter-Cologne Act that establish beneficial uses, water quality objectives, and implementation programs for each of the nine regions in California. The Act also requires waste dischargers to notify the RWQCBs of their activities by filing reports of waste discharge and authorizes the State Water Board and RWQCBs to issue and enforce WDRs, NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs are also authorized to issue waivers to reports of waste discharge and WDRs for broad categories of "low threat" discharge activities that have minimal potential to cause adverse water quality effects when implemented according to prescribed terms and conditions.

California Code of Regulations (Wetlands and Waters Definition)

In 2019, the State Water Board adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining whether a wetland feature is a water of the State; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and WDRs for dredge or fill activities.

The State Water Board indicates that no single accepted definition of wetlands exists at the State level and that the RWQCBs may have different requirements and levels of analysis regarding the issuance of water quality certifications. According to the State Water Board, an area is a wetland if, under normal circumstances:[20]

(1) The area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(2) The duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(3) The area's vegetation is dominated by hydrophytes or the area lacks vegetation.[21]

Under California State law, waters of the State mean "any surface water or groundwater, including saline waters, within the boundaries of the state." As such, water quality laws apply to both surface water and groundwater. After the U.S. Supreme Court decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (53 USC 159), the Office of Chief Counsel of the State Water Board released a legal memorandum confirming the State's jurisdiction over isolated wetlands. The memorandum stated that under the Porter-Cologne Act, discharges to wetlands and other waters of the State are subject to State regulation, and this includes isolated wetlands. In general, the State Water Board regulates discharges to isolated waters in much the same way as it does for waters of the United States, using the Porter-Cologne Act rather than CWA authority.

[20] Normal circumstances are the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed. The determination of whether normal circumstances exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical alteration of wetland hydrology and hydrophytic vegetation and consideration of the purpose and cause of the physical alterations to hydrology and vegetation.

[21] California State Water Resources Control Board (State Water Board). 2021. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019, and Revised April 6, 2021. Website: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html. Accessed December 15, 2024.

National Pollutant Discharge Elimination System

The NPDES permits all involve similar processes, which include submitting notices of intent for discharging to water in areas under the Central Valley RWQCB's jurisdiction and implementing Best Management Practices (BMPs) to minimize those discharges. The Central Valley RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the State.

Construction Activity

The State Water Board stormwater general permit for construction activity (Order 2009-009-DWQ, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) applies to all construction activities that would disturb 1 acre of land or more. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR processes, the State Water Board seeks to ensure that the conditions at a project site during and after construction do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction General Permit, the project applicant must file a notice of intent with the State Water Board to obtain coverage under the permit; prepare a Storm Water Pollution Prevention Plan (SWPPP); and implement inspection, monitoring, and reporting requirements appropriate to the project's risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement. The permit also requires the discharger to consider using post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

Project sites served by the combined sewer system are not required to obtain coverage under the NPDES Construction General Permit.

Industrial General Stormwater Permit

The Statewide stormwater NPDES permit for general industrial activity (Order 2014-0057-DWQ, superseding Order 97-03-DWQ) regulates discharges associated with 10 broad categories of industrial activities, such as operation of wastewater treatment works, and with recycling facilities. The industrial general permit requires the implementation of Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to achieve performance standards. The permit also requires development of a SWPPP that identifies the site-specific sources of pollutants and describes the measures at the facility applied to reduce stormwater pollution. A monitoring plan is also required.

Stormwater

In November 1990, the EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to

municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons. Phase II of the NPDES stormwater permit regulations, which became effective in March 2003, required that NPDES permits be issued for construction activity for projects disturbing 1–5 acres. Phase II of the municipal permit system (known as the NPDES General Permit for Small MS4s, Order No. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipalities of fewer than 100,000 persons to develop stormwater management programs. This permit authorizes discharges of stormwater and some categories of non-stormwater that are not "significant contributors of pollutants."

California Toxics Rule and State Implementation Policy

The CTR, presented in 2000 in response to requirements of EPA's NTR, establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are on the CWA Section 303(c) list for contaminants. The CTR includes criteria for the protection of aquatic life and human health. Human health criteria (water- and organism-based) apply to all waters with a municipal and domestic water supply beneficial use designation as indicated in the basin plans. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the State Implementation Policy, was adopted by the State Water Board in 2000. It establishes provisions for translating CTR criteria, NTR criteria, and basin plan water quality objectives for toxic pollutants into:

- NPDES permit effluent limits,
- Effluent compliance determinations,
- Monitoring for 2,3,7,8-tcdd (dioxin) and its toxic equivalents,
- Chronic (long-term) toxicity control provisions,
- Site-specific water quality objectives, and
- Granting of effluent compliance exceptions.

The goal of the State Implementation Plan is to establish a standardized approach for permitting discharges of toxic effluent to inland surface waters, enclosed bays, and estuaries throughout the State.

California Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act (SGMA), enacted in 2014, provides a regulatory framework for the State to protect and manage groundwater resources over the long-term. The SGMA consists of three legislative bills: Assembly Bill (AB) 1739, Senate Bill (SB) 1168, and SB 1319, and subsequent Statewide regulations. The SGMA requires local agencies to form GSAs for high- and medium-priority groundwater basins, and to develop 20-year-long Groundwater Sustainability Plans (GSPs). Assistance to the GSAs and review and assessment of the GSPs are provided by the DWR.

Local

Butte County

Groundwater Sustainability Plan

The Vina Subbasin in Butte County is under the jurisdiction of the Vina GSA and the Rock Creek Reclamation District GSA. These agencies jointly adopted the Vina GSP at a joint meeting on December 15, 2021. The Vina GSP was approved by the DWR in July 2023.

The GSP must be updated every 5 years. Additionally, annual reports regarding the GSP must be submitted to demonstrate implementation actions and progress toward either achieving or maintaining groundwater sustainability.

Groundwater Management Plan

Within Butte County, groundwater use is managed by the Butte County Groundwater Management Plan (GMP), which aims to minimize the long-term drawdown of groundwater wells, protect groundwater quality, and provide management of groundwater recharge projects.[22] However, areas that are regulated by the Public Utilities Commission are excluded from inclusion in the GMP, including areas within the California Water Service (Cal Water) service area where the BYSP Area is located (See Figure 1-2 of the Butte County Groundwater Management Plan).[23]

City of Chico

General Plan

The Chico 2030 General Plan (General Plan) establishes the following goals and policies relevant to hydrology and water quality:

Policy PPFS-4.2 **(Protection of Groundwater Resources):** Protect the quality and quantity of groundwater resources, including those that serve existing private wells, from contamination by septic systems.

Policy PPFS-5.1 **(Protect Aquifer Resources):** Protect the quality and capacity of the upper and lower Tuscan and Tehama aquifers underlying the Chico Planning Area.

Goal PPFS-6 Provide a comprehensive and functional stormwater management system that protects people, property, water quality, and natural aquifers.

Policy PPFS 6.2 **(Storm Water Drainage):** Continue to implement a stormwater drainage system that results in no net increase in runoff.

Policy PPFS-6.3 **(Storm Water Drainage BMPs):** To protect and improve water quality, require the use of Best Management Practices for stormwater drainage infrastructure suited to the location and development circumstances.

[22] Butte County. 2004. Butte County Groundwater Management Plan. September.
[23] Ibid.

Policy PPFS-6.4 **(Water Runoff):** Protect the quality and quantity of water runoff that enters surface waters and recharges the aquifer.

Goal OS-3 Conserve water resources and improve water quality.

Policy OS-3.1 **(Surface Water Resources):** Protect and improve the quality of surface water.

Policy OS-3.2 **(Protect Groundwater):** Protect groundwater and aquifer recharge areas to maintain groundwater supply and quality.

Municipal Code

Chico Municipal Code Chapter 15.50 governs stormwater management and discharge controls. The chapter prescribes regulations that prohibit non-stormwater discharges to the City's storm drain system, reduce pollutants in stormwater discharges, and minimize degradation of water quality from construction-related activities.

The regulations require applicants for development projects disturbing over 1 acre to file a SWPPP with the State to gain coverage of the activity under the City's Construction General Permit. In addition, development that would create or replace 5,000 square feet or more of impervious surface are considered "regulated projects" subject to post-construction stormwater management requirements, including source control measures and Low Impact Development (LID) design standards. Source control measures deal with specific on-site pollution-generating activities and sources, and LID design standards apply techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall to maintain a site's pre-development runoff rates and volumes. Further, regulated projects that create and/or replace one acre or more of impervious surface require "hydromodification management" that limits post-project runoff to pre-project flow rates for the 2-year, 24-hour storm. Project compliance with these stormwater regulations is assessed and required by City staff prior to issuance of grading or building permits.

3.10.4 - Methodology

The analysis in this section is based, in part, on information from relevant sources including information from the Central Valley RWQCB, FEMA, DWR, the County, the City's General Plan, and the City's Municipal Code. Hydrology and water quality impacts are assessed by comparing existing conditions to future conditions as proposed by the project pursuant to applicable significance thresholds.

3.10.5 - Thresholds of Significance

The City, as Lead Agency, in its discretion has decided to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant. Therefore, there would be a significant impact if the proposed project would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
   (i) Result in substantial erosion or siltation on- or off-site;
   (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
   (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
   (iv) Impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.10.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides feasible mitigation measures where appropriate.

Surface and Groundwater Quality

Impact HYD-1:	**The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.**

Construction

Construction activity for the proposed project (including demolition, grading, building construction, paving, and utility construction) would expose soils on the project site to potential erosion, and to potential pollutants related to the use of construction equipment (both gasoline- and diesel-powered heavy equipment), construction materials, and construction vehicles. Runoff from graded areas could carry eroded soils and pollutants (e.g., gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances are assumed to be used during construction) into the storm drainage systems and into Comanche Creek and eventually the Sacramento River, increasing sedimentation, degrading downstream water quality, and potentially affecting the groundwater table. This would represent a potentially significant construction impact related to surface and groundwater quality.

Construction-related project activities would not require dewatering or the establishment of new groundwater wells. On-site groundwater monitoring wells would be maintained, with oversight by DTSC. The proposed project would be required to adhere to all applicable laws and regulations (as described in the Regulatory Framework, above), which reflect a comprehensive regulatory framework to help prevent violations of water quality standards and WDRs as well as help to ensure no substantial degradation of water quality. In connection therewith and consistent with Municipal Code 15.50, development within the project site would be required to comply with the applicable terms of the State Water Board's Construction General Permit, which require the preparation and implementation of a SWPPP that includes BMPs to ensure reduction of pollutants from construction activities, such as earthmoving and grading, that could potentially enter surface waters. Implementation of the SWPPP would also prevent pollutants from entering surface and groundwater by requiring the inclusions of BMPs, such as the use of biofiltration swales and bioretention basins, that would prevent pollutants from moving off-site through the treatment of stormwater on-site. The intention would be to keep all products of erosion from moving off-site into receiving waters by treatment on-site. Furthermore, compliance with Chapter 15.50 of the Municipal Code would ensure implementation of BMPs (e.g., hydroseeding, biodegradable erosion control blankets, silt fences at downstream storm drain inlets, and post-construction clearing of accumulated debris and sediment in drainage structures) contained in the SWPPP via verification by a City inspector during the construction period.

As discussed in Section 3.9, Hazards and Hazardous Materials, soil contamination was identified in the Phase II ESA for the project site and the project site is under a Land Use Covenant (LUC) that restricts activities in proximity to the groundwater monitoring system and the subsurface asphalt cap. Mitigation Measure (MM) HAZ-1 requires that a Soil and Debris Management Plan (SDMP) be prepared prior to construction to address the conditions at the project site. The SDMP would include site control measures; excavation, off-haul, and backfill procedures; stormwater protection measures; and waste soil handling and disposal procedures. Additionally, the SDMP would include specific measures to protect the integrity of the monitoring system and asphalt cap. Adherence to the SDMP would ensure that construction activities associated with the proposed project would not violate water quality standards or substantially degrade water quality.

Compliance with applicable laws, policies and regulations would minimize the potential to degrade water quality in downstream water bodies; however, the soil contamination at the project site could still pose a threat to water quality without the implementation of MM HAZ-1. Implementation of MM HAZ-1 would ensure that the necessary procedures are followed while handling and disposing contaminated soil, as well as the protection of the asphalt cap and groundwater monitoring system. As a result, construction-related project impacts to surface and groundwater and respective water quality would be less than significant with mitigation incorporated.

Operation

The project site is a previously-developed site in an urbanized area characterized by surrounding agricultural and residential uses with a mix of impervious and pervious surfaces. Development in the project site would result in new impervious surfaces compared to existing conditions that would in turn generate stormwater runoff, which may carry pollutants such as pesticides, fertilizers, and

deposits of fluids and metals from motor vehicles into Comanche Creek and downstream waterways or allow seepage of such pollutants into the groundwater table.[24] This would represent a potentially significant operational impact related to surface and groundwater quality.

Development within the project site would be subject to a comprehensive regulatory framework to ensure there would be no violation of water quality standards or WDRs as well as ensuring that project operation would not substantially degrade water quality. For example, the proposed project's design and post-project operation and maintenance would be subject to applicable provisions of the NPDES General Permit for Small MS4s governing discharges, which includes implementation of a Storm Water Management Plan (SWMP). Two fundamental components are associated with the SWMP: (1) treatment for pollutants collected in stormwater using LID measures, and (2) no net increase in the erosion potential of the receiving stream over the pre-project (existing) condition. All proposed LID treatment measures would be required to be designed in accordance with engineering criteria in the City's Post-Construction Stormwater Standards Manual. Implementation of the SWMP would require the preparation of a clearly defined Operations and Maintenance (O&M) Plan to ensure that installed stormwater treatment measure(s) and hydromodification management control(s)[25] are inspected and properly operated and maintained for the life of the proposed project. The project site in its existing state is generally clear of storm drain features, with the exception of minor culverts, low swales, and a non-functional retention basin. The proposed storm drainage system would consist of a conventional on-site storm drain system with mains, catch basins, and maintenance holes. Stormwater from the BYSP Area would be collected and directed to a combination water quality and retention/detention basin (stormwater basin) located within the off-site improvement area south of the BYSP Area on Assessor's Parcel Number (APN) 039-410-025, within the off-site improvement area. One of two storm drain alignment options would be developed to connect the retention/detention basin to an outfall on Comanche Creek (Exhibit 2-2b). The proposed project's drainage system would be required to comply with the City's Post-Construction Stormwater Standards Manual which identifies BMPs to control the potential pollutant load of stormwater runoff.

As noted above, in accordance with applicable laws and regulations, the applicants for development of any project parcel would be required to prepare and implement a clearly defined O&M Plan to ensure that installed stormwater treatment measures and hydromodification management controls are inspected and properly operated and maintained for the life of the project.

Therefore, based on the foregoing, with the implementation of MM HAZ-1, preparation of a SWMP, and adherence to other applicable laws and regulations, operation-related project impacts related to surface and groundwater and respective water quality would be reduced less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

[24] Little Chico and Big Chico creeks are far enough away from the project site to be impacted by runoff from the project site.
[25] Hydromodification controls are required for projects that replace on acre or more of impervious surface.

Mitigation Measures

Implement MM HAZ-1.

Level of Significance after Mitigation

Less than significant impact.

Groundwater Supply/Recharge

Impact HYD-2:	**The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

Impact Analysis

Groundwater Supplies

As mentioned above, groundwater pumping within the BYSP Area is prohibited through a deed restriction. The proposed project would not include any on-site groundwater production or well installation. However, the Chico-Hamilton City District of Cal Water (Cal Water), which receives its water supply exclusively from groundwater, would provide water to the proposed project, as detailed more fully in the Water Supply Assessment (Appendix K.1). At buildout, water demand for the proposed project is anticipated to be approximately 510 acre-feet per year (AFY);[26] refer to Section 3.16, Utilities and Service Systems for further detail regarding the demand estimate.

The State of California mandates that urban water suppliers, such as Cal Water, prepare an Urban Water Management Plan (UWMP). These plans ensure that adequate water supplies are available to meet existing and future water needs.[27] Cal Water's 2020 UWMP for the Chico-Hamilton City District anticipates future growth within the City and calculates water demand projections based on a population increase of 24,724 persons between 2020 and 2045. The UWMP projects total potable and nonpotable water demand to be 25,571 AFY in 2035 and 26,474 AFY in 2045. Thus, the proposed project's demand would represent approximately 2 percent of total projected demand in 2035 and approximately 1.9 percent of total projected demand in 2045.[28,29]

The 2020 UWMP indicated that the aquifers beneath the Chico-Hamilton City District contain large volumes of stored groundwater, and groundwater levels have recovered quickly after past drought events. Groundwater pumping in the Chico area is not restricted or adjudicated. The UWMP noted the difficulty in estimating an exact supply quantity available to the Chico-Hamilton City District and identified 90,288 AFY as a maximum theoretical supply, as this represents the maximum pumping capacity of all of its wells. The UWMP further notes that a more conservative estimate of actual supply would be 80 percent of the maximum theoretical supply (72,230 AFY). However, because

[26] EKI Environment & Water, Inc. 2024. Water Supply Assessment and Water Supply Verification for the City of Chico Barber Yard Specific Plan Project. EKI C10117.01. February 2024.

[27] City of Chico. No date. Chico Sustainability. Water Goals, Plans & Policies. Website: https://www.chicosustainability.org/water-and-waste/water-progress-projects.php#. Accessed December 15, 2024.

[28] 510/25,571 = 1.99%, 510/26,474 = 1.93%

[29] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. Chico-Hamilton City District. June.

actual demand in the Chico-Hamilton City District is well below this value, the UWMP uses the much lower values previously described as the basis for long-term supply projections.

Given that the 2020 UWMP projections considered the anticipated growth that will occur as a result of the proposed project and no supply shortfalls were identified, the demonstrated effectiveness of Chico District's Water Shortage Contingency Plan (WSCP), and the increasing efficiency and drought requirements from the State—the Water Supply Assessment (WSA) demonstrates and verifies that sufficient water supply is estimated to meet all existing and planned future demands of the proposed project. The impacts on groundwater supplies would be considered less than significant.

Refer to Section 3.17, Utilities and Service Systems for further discussion regarding the absence of groundwater use at the project site.

Groundwater Recharge

Implementation of the BYSP would result in the development of an area that currently consists of a mixture of developed, disturbed and undeveloped lands. As a result of the additional impervious surfaces associated with project implementation, the proposed project would reduce areas available for water percolation into the ground and aquifer. However, the proposed project's storm drainage system includes a stormwater basin and other LID features and infiltration approaches, such as permeable pavers, gravel alleys instead of concrete, reducing street widths, separating sidewalks, and planting trees, that would promote infiltration of runoff into the soil. These features would promote groundwater recharge. Runoff that is collected into the proposed project's storm drainage system would be conveyed to an off-site stormwater basin south of the BYSP Area for attenuation before eventual discharge into Comanche Creek. Groundwater recharge commonly occurs within stormwater basins and along the natural earthen channels of creeks.

The proposed project would be required to adhere to all applicable laws and regulations associated with protecting groundwater recharge areas, including the management objectives included in the Vina GSP and the UWMP. The proposed project would be designed consistent with applicable General Plan policies that are designed to facilitate groundwater recharge. Therefore, continued groundwater recharge would occur and the proposed project would not interfere substantially with groundwater recharge. The impact would be less than significant.

Level of Significance before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance after Mitigation

Less than significant impact.

Drainage Leading to Erosion/Siltation, Flooding, Additional Sources of Polluted Runoff, or Impedance of Flood Flows

Impact HYD-3: **The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

- **i) Result in substantial erosion or siltation on- or off-site;**
- **(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**
- **(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
- **(iv) Impede or redirect flood flows?**

i) Construction-related Erosion and Siltation

The proposed project would have a significant impact if it were to substantially alter the existing drainage pattern of the project site in a manner that would result in substantial erosion or siltation on- or off-site. Such drainage effects could occur from grade changes at the project site, exposure of soils for periods of time during precipitation events, or alterations to creek beds.

There are no creek beds on the project site; however, Comanche Creek is located approximately 0.3 miles south of the BYSP Area and Little Chico Creek is located approximately 0.4 mile north the BYSP Area. The proposed project includes the installation of an off-site outfall at Comanche Creek associated with the proposed off-site stormwater basin. Installation of the outfall and related off-site facilities could result in substantial erosion or siltation due to alteration of the creek bed. However, Comanche Creek is likely to be determined a jurisdictional water of the United States and/or a water of the State and will thus, to the extent this occurs, be regulated by the USACE and/or the RWQCB, respectively. Installation of the outfall and related off-site facilities would be required to be completed in accordance with the current City of Chico Storm Drain Master Plan recommendations and would also be mandated to comply with any requirements as determined by the applicable regulatory agencies (USACE, RWQCB and/or California Department of Fish and Wildlife [CDFW]) pursuant to applicable laws and regulations following the preparation of a jurisdictional delineation that will confirm the extent of jurisdiction waters (if any), as well as permitting applications that will quantify the extent of temporary and permanent impacts (if any) under each agency's jurisdiction. Refer to Section 3.4, Biological Resources, for further discussion.

On-site construction activities could also result in substantial erosion or siltation due to drainage pattern alteration and could therefore result in polluted runoff entering the City's stormwater drainage system and nearby creeks. However, as previously discussed in Impact HYD-1, the proposed project would be required to adhere to all applicable laws and regulations as part of the comprehensive regulatory framework that governs water quality issues, including the implementation of a SWPPP as part of its Construction General Permit. The SWPPP is designed to ensure that erosion and siltation are prevented or minimized to the maximum extent feasible during construction through the implementation of standard BMPs. Consistent with Chapter 15.50 of the

Municipal Code, each applicant, in connection with the relevant individual specific development proposal, would be required to implement the BMPs contained in the SWPPP that would be verified by a City inspector during the construction period.

Therefore, although construction activities have the potential to generate increased erosion and siltation, compliance with applicable policies, laws, and regulations would minimize the potential for this to occur. With the implementation of these uniformly applied standards and procedures and adherence to all other laws and regulations, construction impacts related to alteration of drainage pattern and resulting in erosion or siltation would be less than significant.

Operation-related Erosion and Siltation

Development of the proposed project would increase impervious surfaces compared to existing conditions. Thus, project operation could result in increased amounts of stormwater runoff that could result in erosion and siltation and carry pollutants into nearby creeks and ultimately the Sacramento River.

The proposed project would include the installation and operation of an off-site stormwater basin that would be designed to treat on-site stormwater and prevent erosion and siltation from increasing pollutant loads in the stormwater system and Comanche Creek. Additionally, approaches to increase infiltration of stormwater into soils, such as permeable pavers, gravel alleys instead of concrete, reducing street widths, separating sidewalks, and planting trees, would promote infiltration of runoff into the soil and reduce the amount of stormwater runoff. Stormwater that would be collected in the detention/retention treatment areas would either evaporate or infiltrate through a bioretention filter into surrounding soils. In addition, the proposed project would be required to comply with all other applicable laws, regulations, and policies, including the City's NPDES program, SWMP, and all relevant provisions of the Municipal Code related to stormwater pollution, including the provision of appropriately sized bioretention areas for pretreatment of stormwaters in accordance with the NPDES General Permit for Small MS4s governing discharges. As discussed in Section 3.4, Biological Resources, MM BIO-8 requires that a Streambed Alteration Agreement be obtained and approved, which would include, but not be limited to, the implementation of erosion and bank stabilization measures. Adherence to all applicable laws, regulations, and policies as part of the proposed project's compliance with the comprehensive regulatory framework governing water quality, combined with implementation of MM BIO-8, would ensure that erosion and siltation impacts related to the outfall in Comanche Creek would be less than significant with mitigation incorporated.

ii) Construction-related Surface Runoff

The proposed project would have a significant impact if it were to substantially alter the existing drainage pattern of the project site in a manner that would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Such drainage effects could occur from grade changes at the project site, exposure of soils for periods of time during precipitation events, or alterations to creek beds.

As previously discussed, the project site is within an area designated as an area of Minimal Flood Hazard (Zone X) according to the FEMA FIRM. However, the proposed project would be conducting

construction-related activities within the project site, which could alter the existing drainage pattern in a manner that could increase the rate or amount of surface runoff. If not appropriately addressed, this could result in on- or off-site flooding.

As discussed in Section 2.0, Project Description, the existing storm drain features in BYSP Area are limited to minor culverts and low swales that convey surface runoff to the southwest corner to a small retention basin (which would be removed as part of the proposed project). The proposed storm drain system for the BYSP Area would consist of a conventional on-site storm drain system with mains, catch basins, and maintenance holes designed in accordance with applicable City of Chico Storm Drain Master Plan and design standards. The storm drainage system would collect runoff and direct it to a combination water quality and retention/detention basin (stormwater basin) to be located within the off-site improvement area. Storm events exceeding the 2-year storm would be slowly released to Comanche Creek through a new City outfall.

As explained in detail above, during construction the proposed project would be required to adhere to all applicable laws, regulations, and policies governing stormwater runoff, including the implementation of a SWPPP. The SWPPP will include performance standards for post-construction BMPs, including the use of permanent post-construction BMPs that manage stormwater runoff rates to match pre-construction project site hydrology—which would reduce the potential for flooding impact related to surface runoff. Therefore, the impact would be less than significant.

Operation-related Surface Runoff

The proposed project would increase the amount of impervious surfaces on the project site, which could increase the rate or amount of surface runoff in a manner which could result in flooding. This represents a potentially significant impact. However, offsetting the proposed project's increase in impervious surfaces through the final design of the proposed stormwater basin would be required by Chapter 15.50 of the Chico Municipal Code. The stormwater basin and related stormwater facilities would be required to comply with all applicable laws, regulations, and policies, including adhering to applicable meter runoff volumes in accordance with the Municipal Regional Permit as implemented by the Central Valley RWQCB. Furthermore, the proposed project would be required to prepare a SWMP that would ensure no net increase in surface runoff on-site. Therefore, impacts related to surface runoff resulting in flooding on or off-site would be less than significant.

iii) Construction-related Exceedance of Storm Drain Capacity

The proposed project would have a significant impact if it were to substantially alter the existing drainage pattern of the project site in a manner that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. During construction, the proposed project would increase stormwater runoff generation, which could potentially lead to an exceedance of the storm drain capacity.

The proposed project would be required to adhere to all applicable laws, regulations, and policies including the implementation of a SWPPP, as part of its Construction General Permit. The SWPPP is designed to ensure that erosion, siltation, and flooding are prevented or minimized to the maximum extent feasible during construction through the implementation of standard BMPs. Consistent with

Chapter 15.50 of the Municipal Code, each applicant, in connection with the relevant individual specific development proposal, would be required to implement the relevant BMPs contained in the SWPPP that would be verified by a City inspector during the construction period. The SWPPP will include performance standards for post-construction BMPs, including the use of permanent post-construction BMPs that manage stormwater runoff rates to match pre-construction project site hydrology—which would reduce the potential storm drain exceedance due to surface runoff. Therefore, the construction impact related to exceedance of storm drain capacity and stormwater pollution would be less than significant.

Operation-related Exceedance of Storm Drain Capacity

The proposed project would result in increased impervious surface area and increased localized runoff, which could potentially exceed storm drainage capacity and increase pollutant loads. However, the proposed project would include a conventional on-site stormwater drainage system with mains, catch basins, and maintenance holes designed in accordance with applicable City of Chico Storm Drain Master Plan and design standards, as well as all other applicable laws and regulations. The proposed project's storm drainage system would collect and convey stormwater to an off-site stormwater basin. Storm events exceeding the 2-year storm would slowly be released to Comanche Creek via a new outfall which would also be built in accordance with City of Chico Storm Drain Master Plan recommendations as well as all other applicable laws and regulations. Additionally, approaches to increase infiltration of stormwater into soils, such as permeable pavers, gravel alleys instead of concrete, reducing street widths, separating sidewalks, and planting trees, would be incorporated into the project design as envisioned in the BYSP, thereby helping to promote infiltration of runoff into the soil and reduce increased amounts of stormwater entering the storm drain system.

The proposed bioretention treatment areas would be designed to reduce runoff volume entering the City stormwater drainage system or waterways, in accordance with the Municipal Regional Permit as implemented by the Central Valley RWQCB. In addition, the proposed project would be required to comply with the City of Chico NPDES program, SWMP, and all relevant provisions of the Municipal Code and other applicable laws and regulations related to stormwater pollution, including the provision of appropriately sized bioretention areas for pretreatment of stormwaters in accordance with NPDES guidelines. Thus, operation of the proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, related impacts would be less than significant.

iv) Construction-related Impacts to Flood Flows

Impacts related to impedance of flood flows would only occur during the operational phase of the proposed project. As such, no construction impedance of flood flow impacts would occur.

Operation-related Impacts to Flood Flows

The proposed project would have a significant impact if it were to substantially alter the existing drainage pattern of the project site in a manner that would impede or redirect flood flows.

As previously mentioned, the entire project site is within an area of Minimal Flood Hazard (Zone X) as defined by FEMA and therefore would not place structures in such a way that flood flows would be impeded or redirected. Areas surrounding the creeks within the City, including Comanche Creek to the south of the off-site improvement area, are classified as special flood hazard areas; however, the proposed project would control stormwater runoff on-site and would not contribute to increased flooding associated with nearby creeks.

As detailed above, the proposed project would include a conventional on-site stormwater drainage system, which would be required to meet all relevant standards pursuant to applicable laws and regulations, which would collect and convey stormwater to an off-site stormwater basin. Storm events exceeding the 2-year storm would slowly be released to Comanche Creek via a new City outfall which would also be built in accordance with City of Chico Storm Drain Master Plan recommendations and all other applicable laws and regulations, including, among others, the requirement of no net increase as compared to pre-project flows. Impacts related to impedance or redirection of flood flows would be less than significant.

Level of Significance before Mitigation

Potentially significant impact with regard to Impact 3(i).

Mitigation Measures

Implement MM BIO-8.

Level of Significant after Mitigation

Less than significant impact.

Risk of Pollutant Release Due to Inundation

Impact HYD-4:	**The proposed project would not be located in a flood hazard zone, tsunami, or seiche zone, or risk release of pollutants due to project inundation.**

Construction and Operation

The entire project site is within an area of Minimal Flood Hazard (Zone X) as defined by FEMA. The northern boundary of the project site is approximately 120 feet from a FEMA-designated flood hazard zone associated with Little Chico Creek. Although the project site is adjacent to Zone AO associated with Little Chico Creek, the expected path of the flood inundation is not mapped with the project site. The area along Comanche Creek along the off-site improvement area's southern boundary is identified as within the 100-year flood plain (Zone AE).[30] The area is narrow, closely following the route of Comanche Creek (Exhibit 3.10-1) and therefore flood inundation is not expected to affect the project site. As such, the proposed project would not be expected to be inundated by flood waters.

[30] Federal Emergency Management Agency (FEMA). 2011. National Flood Hazard Layer Viewer. Website: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed October 18, 2024.

The project site is not located near the ocean and therefore, would not be susceptible to inundation from a tsunami. The project site is not located near a large, enclosed body of water and therefore is not susceptible to inundation from a seiche.

For these reasons, impacts related to risk of pollutant release due to inundation would be less than significant.

Level of Significance before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significant after Mitigation

Less than significant impact.

Water Quality Control or Sustainable Groundwater Management Plans Consistency

Impact HYD-5: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Construction

The proposed project would not conflict with the City's NPDES program. As discussed at length above, development within the BYSP Area would be required to comply with the terms of the Construction General Permit, which would require the preparation and implementation of a SWPPP that includes BMPs to ensure reduction of pollutants from construction activities potentially entering surface waters. Construction activities would not require the use of on-site groundwater or interfere with on-site groundwater monitoring. Therefore, construction impacts related to a water quality control plan or GMP consistency would be less than significant.

Operation

Cal Water, which receives its water supply exclusively from groundwater, would provide water to the proposed project to meet its water demand. As described previously, the proposed project is anticipated to demand 510 AFY of water, which would represent approximately 2 percent of the 25,571 AF of water demand in 2035 estimated by the 2020 UWMP.[31,32] The 2020 UWMP indicates that the subbasins underlying the Chico District are not adjudicated and are not in a condition of critical overdraft.[33] Because project demand would represent a very small percent of total groundwater supply (2 percent for approximately 2.7 percent of the City's population)[34] and the abundance of groundwater supply in the Chico area, the proposed project would not significantly decrease groundwater supplies. Given that there are adequate groundwater supplies to serve the project site, the proposed project would not obstruct implementation of Cal Water's UWMP.

[31] 510/25,571= 1.99%
[32] California Water Service (Cal Water). 2021. 2020 Urban Water Management Plan. Chico-Hamilton City District. June.
[33] Ibid.
[34] 1,250 proposed units x 2.38 persons per household = 2,975. 2,975/City population of 109,589 as of January 1, 2024=0.027

Butte County's GMP governs areas overlying groundwater basins or associated groundwater subbasins within Butte County. However, areas that are regulated by the Public Utilities Commission are excluded from inclusion in the GMP, including areas within the Cal Water service area.

As noted above, the project site is located within Cal Water's service area and would receive potable water services from Cal Water. Therefore, the Butte County GMP does not apply to the project site. As previously discussed, the project site is located within the Vina Subbasin of the Sacramento Valley Groundwater Basin. The Vina Subbasin is designated as a "high priority" basin by the DWR and is managed under the Vina GSP. The purpose of the Vina GSP is to meet the regulatory requirements of the SGMA and to provide a path to achieve and document sustainable groundwater management within 20 years of the adoption of the GSP. The Vina Subbasin is subject to the General Plan as well as the Butte County General Plan 2030 and implementation of the Vina GSP accounts for changes in population and updates to both General Plans.[35] Furthermore, future urban and industrial water demand detailed in the Vina GSP is based upon estimates provided by urban water suppliers, such as Cal Water, as part of the implementation of the 2020 UWMP. As noted previously, the proposed project's water demand is anticipated to be approximately 2 percent of the total water demand projected for 2035 by the 2020 UWMP. Therefore, while the proposed project would result in an increase in groundwater usage, this increase in usage has been accounted for in the Vina GSP. The proposed project would therefore not conflict with or obstruct the implementation of the Vina GSP.

Additionally, as discussed under Impact HYD-1, the proposed project would be subject to the NPDES General Permit for Small MS4s governing discharges, which includes implementation of a SWMP as well as General Plan goals, policies, and objectives and Municipal Code regulations related to the maintenance of water quality and all other applicable laws and regulations governing water quality and groundwater sustainability. Furthermore, implementation of a site-specific SWMP would promote sequestration of pollutants and sedimentation. Therefore, operation of the project would not conflict with the implementation of a water quality control plan.

Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and thus operational impacts related to water quality control plan or GMP consistency would be less than significant.

Level of Significance before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significant after Mitigation

Less than significant impact.

[35] Vina and Rock Creek Reclamation District Groundwater Sustainability Agencies. 2021. Vina Groundwater Subbasin Groundwater Sustainability Plan. December.

3.10.7 - Cumulative Impacts

Hydrology

This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, could result in a cumulatively significant impact to hydrology. This analysis then considers whether incremental contribution of impacts associated with implementation of the proposed project would be significant (i.e., "cumulatively considerable"). Both conditions must apply for a project's cumulative effects to rise to the level of significance.

The geographic scope of the cumulative hydrology analysis is the Big Chico Creek watershed and the Little Chico Creek/Butte Creek watershed, which generally encompasses the area of the project site as well as portions of Butte and Tehama counties. In general, according to the FEMA National Flood Hazard Layer web viewer, the highest flood risk within the entire watershed is adjacent to the creeks and streams within the watershed. Hydrologic impacts tend to be localized to a watershed; therefore, the area within the Big Chico Creek watershed and the Little Chico Creek/Butte Creek watershed would be most affected by project activities. All cumulative projects would be required to comply with applicable laws and regulations and would be governed by the Central Valley RWQCB and General Plan and applicable codes, ordinances, and policies, which prevent a project from increasing off-site surface water flow from existing conditions and further ensures that projects adhere to BMPs during construction to prevent pollutants from being carried off-site. Additionally, cumulative development would be required to comply with regional, State, and federal laws and regulations regarding hydrologic impacts. These laws and regulations, in combination with implementation of relevant provisions of the General Plan, would result in a less than significant cumulative impact related to hydrology.

The proposed project would also be required to comply with all applicable laws and regulations, including those set forth in the CWA, the Porter-Cologne Act, RCRA, the United States Department of Transportation (USDOT), and applicable goals, policies of the General Plan and Municipal Code related to hydrology. This would ensure that the proposed project's contribution to this already less than significant cumulative impact would not be cumulatively considerable. Thus, there would be a less than significant cumulative impact related to hydrology.

Water Quality

The geographic context for consideration of cumulative impacts related to surface water quality is the Sacramento River Valley. All cumulative projects, including the proposed project, would involve short-term construction and long-term operational activities that would have the potential to degrade water quality in downstream water bodies, including the Sacramento River. All cumulative project construction would be required to adhere to all applicable laws and regulations, including obtaining a Construction General Permit from the State Water Board, which would require preparation of a SWPPP that would control potential discharges of contaminants into the Sacramento River and nearby creeks. In addition, these cumulative projects would be required to prepare a SWMP and comply with relevant General Plan policies and Municipal Code provisions intended to safeguard water quality during operation. The foregoing would ensure that cumulative impacts in this regard are less than significant.

With respect to the proposed project's contribution, it would also be required to obtain a Construction General Permit from the State Water Board and prepare a SWPPP as well as a SWMP. The proposed project would also be required to comply with all other standards and mandates and ensure consistency with relevant General Plan policies and provisions of the Municipal Code that are intended to protect water quality during operation. Thus, the proposed project's contribution to this already less than significant cumulative impact would not be cumulatively considerable.

The geographic context for consideration of cumulative impacts related to groundwater quality and management is the Sacramento Valley Groundwater Basin. All cumulative projects, including the proposed project, would involve short-term construction and long-term operational activities that would have the potential to impact groundwater quality and management. Construction related to cumulative projects would be required to adhere to all applicable laws and regulations governing groundwater quality, including obtaining a Construction General Permit from the State Water Board, which would require preparation of a SWPPP that would control erosion, siltation, and pollutants that could seep into groundwater. In addition, operations of these cumulative projects would be required to comply with applicable laws and regulations implemented by the Central Valley RWQCB, thereby ensuring that stormwater is pre-treated via bioretention to ensure that percolation to the groundwater table would not result in degradation of groundwater quality. Thus, there would be a less than significant cumulative impact related to groundwater quality.

With respect to the proposed project's contribution, it would also be required to obtain a Construction General Permit from the State Water Board and prepare a SWPPP as well as a SWMP. The proposed project would also be required to comply with all other standards and mandates and ensure consistency with relevant General Plan policies and provisions of the Municipal Code that are intended to protect water quality during operation and would incorporate numerous design features to help facilitate infiltration (and thus groundwater recharge) and prevent impacts to water quality. Therefore, the proposed project's contribution to the less than significant cumulative impact would not be cumulatively considerable.

Flooding

The geographic context for consideration of cumulative impacts related to flooding is the City of Chico. Most of the land within the City limit is included in Zone X, which is the FEMA designation for lands outside of the 100-year floodplain. However, areas surrounding the creeks within the City are classified as special flood hazard areas (Zones A, AE, and AO). Cumulative development projects in flood hazard areas would be required to install stormwater facilities to ensure projects would not be susceptible to flooding. Outside of flood hazard areas, the proposed project and other cumulative developments would also be required to install stormwater facilities and prepare a SWPPP and SWMP for review and approval by the City in accordance with the Municipal Code and other applicable laws and regulations. The City would review cumulative development proposals as well as the proposed project to ensure they are in accordance with applicable guidelines, ordinances, and permitting requirements. Thus, there would be a less than significant cumulative impact related to flooding.

With respect to the proposed project's contribution to this already less than significant cumulative impact, as discussed above, the proposed project would not be located in an area prone to flooding and would be required to install appropriately sized storm drainage facilities to accommodate its demand and would not impede or redirect any flood flows. Therefore, its contribution would not be cumulatively considerable.

Level of Cumulative Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significant after Mitigation

Less than significant impact.

3.11 - Land Use and Planning

3.11.1 - Introduction

This section describes the existing setting with respect to land use and planning and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on, in part, review of the Chico 2030 General Plan, the Chico Municipal Ordinance, the City's Climate Action Plan Update, and the County General Plan and Code. During the Notice of Preparation (NOP) scoping period, the following public comments were received related to land use and planning.

- Consider the consistency of the off-site stormwater basin with agricultural zoning.

3.11.2 - Environmental Setting

Land Use

Project Site

As discussed in Chapter 2, Project Description, the Barber Yard Specific Plan (BYSP) Area is approximately 133-acres and is located in the southern portion of the City, as shown in Exhibit 2-2a. The BYSP Area is bounded by various individual properties to the northwest, Chestnut Street and Normal Avenue to the northeast, Estes Road to the east, and Union Pacific Railroad (UPRR) to the southwest. To the south, the BYSP Area is bounded by a portion of Butte County that is unincorporated, including a decommissioned UPRR spur. Agricultural and rural residential areas lie to the south and west across the UPRR.

The proposed project also includes ground disturbance of the approximately 16-acre off-site improvement area to install various improvements to serve the proposed project, consisting of an approximately 3- to 5-acre stormwater basin and related access drive from Estes Road. This area is located directly south of the BYSP Area, in unincorporated Butte County, on APN 039-410-025 (Exhibit 2-2a and 2-2b), The off-site improvement area is bounded by a Pacific Gas and Electric Company (PG&E) parcel to the north, rural residential and agricultural land uses to the east, agricultural land and Comanche Creek to the south, and the UPRR as well as more rural residential and agricultural land uses to the west. Other off-site improvements consist of various other public utility connections (including a new storm drainage outfall into Comanche Creek and a new sewer connection across the UPRR land and Ivy Street) and various public roadway/bike path connections to existing public roadways at West 14th, West 16th, West 18th, West 20th, Ivy Streets and Estes Road.

The BYSP Area is generally flat and fenced to prevent public access and contains abandoned structures and roadways. The off-site improvement area containing the proposed off-site detention pond and related facilities is largely cleared or consists of orchard trees located behind the residences fronting on Estes Road (Exhibit 2-2a and 2-2b).

The BYSP Area was the home of a factory operated by the Diamond Match Company in the early twentieth century before closing in 1975. The Louisiana Pacific Corporation purchased the BYSP Area

in 1984 and operated its Finished Wood Products Division and a remanufacturing facility until 1989. The BYSP Area was used by other owners for various industrial uses until all such uses terminated in 2004. Within the BYSP Area today, uses consist primarily of abandoned structures and roadways in various states of disrepair, as well as existing indoor Recreational Vehicle (RV) storage. Existing conditions are shown on Exhibit 2-3. There are three existing buildings that have the potential for adaptive reuse, as described further below and as shown in Exhibit 2-3, including the Engineering Building (approx. 17,200 square feet), the Shop Building (approx. 2,700 square feet), and the Warehouse (approx. 130,000 square feet). The Warehouse is currently leased for indoor RV storage.

Regional access to the BYSP Area is provided by State Route (SR) 32 and SR-99. Primary vehicular access to the existing BYSP Area is from West 16th Street, which runs generally east-west from the adjacent Barber Neighborhood through the BYSP Area and Ivy Street, which runs generally north–south. Access to the off-site improvement area where the stormwater basin and related outfall is proposed is via a public easement from Estes Road to the properties.

The proposed off-site stormwater basin area is largely cleared and undeveloped, a portion of which is within areas of a former almond orchard. The proposed storm drain alignment would be located within or along areas of former and existing orchard lands and rural residences on Estes Road (Exhibit 2¬2b). The remaining portions of the off-site improvement area are within the City of Chico and consist of undeveloped public rights-of-way and public utility connections.

Existing Land Use Designations

Project Site

The BYSP Area is designated in the City's General Plan as "Special Planning Area" (SPA) specifically "SPA-2–Barber Yard." The SPA designation identifies areas for significant new growth that require subsequent comprehensive planning and are to be developed as connected and complete neighborhoods with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. The General Plan Land Use Diagram (Figure LU-1 of the 2030 General Plan Land Use Element) conceptually identifies a mix of desired land uses within the SPA 2–Barber Yard, including "Low Density Residential" (LDR), "Medium Density Residential" (MDR), "Medium-High Density Residential" (MHDR), "High Density Residential (HDR), "Residential Mixed Use" (RMU), Commercial Mixed Use (CMU), "Office Mixed Use," "Industrial/Office Mixed Use," and "Secondary Open Space" (SOS).

Surrounding Area

As detailed more fully below, surrounding land use designations in the project vicinity include LDR, MDR, and MHDR to the northwest, LDR to the northeast and east, and Manufacturing and Warehousing (MW) to the southeast. The UPRR mainline to the southwest does not have a City land use designation. Land directly south of the BYSP Area and southwest of the UPRR mainline is outside of the City's Sphere of Influence (SOI) within the jurisdiction of Butte County. These areas have a County land use designation of Agriculture (AG). Land uses in these areas are consistent with these designations.

West

The BYSP Area is bounded by the UPRR to the west. Land directly west of the UPRR railroad is within the jurisdiction of Butte County and is designated Agriculture (AG). Land to the northwest is designated LDR and MHDR.

North

The BYSP Area is bounded by existing residential development in the Barber Neighborhood to the north and northeast. Land to the north is designated LDR and MDR.

East

Land to the east is designated LDR and the southeast of the BYSP Area contains existing commercial and manufacturing development and is designated MW.

South

Land to the south of the BYSP Area is bounded by an abandoned railroad spur owned by UPRR, and lands south of the railroad spur are within the jurisdiction of Butte County and designated AG.

Table 3.11-1: Surrounding Land Use Designations and Zoning

Land Use	Relationship to Project Site	Land Use Designation	
		General Plan	Zoning
UPRR	West/South	N/A	N/A
Agriculture/Rural Residential	West/South (beyond UPRR)	AG (Butte County)	AG-40 (Butte County)
Residential	North	Low Density Residential (City)	R1–Low Density Residential (City)
Residential	Northwest	Medium Density Residential (City)	R2–Medium Density Residential (City)
Residential	Northwest	Medium-High Density Residential (City)	R3–Medium-High Density Residential (City)
Commercial/Manufacturing	East	Manufacturing and Warehousing (City)	ML–Light Manufacturing (City)

Source:
City of Chico. 2022. City of Chico Zoning Map.
City of Chico. 2013. City of Chico General Plan Diagram.
Butte County. 2019. Butte County General Plan Land Use Map and Zoning Map.

Off-site Improvement Area

Those portions of the off-site improvement area that are located within the jurisdiction of Butte County are on parcels designated by the Butte County General Plan as AG. This unincorporated area is also identified by the California Department of Conservation California Important Farmland Finder

as Prime Farmland.[1] Areas surrounding the off-site improvement area are also designated as AG. For a discussion of agricultural impacts, refer to Section 3.2, Agricultural Resources.

Existing Zoning

Barber Yard Specific Plan Area

The BYSP Area is zoned SPA by the Chico Zoning Ordinance. According to Section 19.40.030 of the Chico Municipal Code, all zoning districts may be compatible with the SPA General Plan designation if the zoning district is adopted as part of a specific plan or other comprehensive master plan for a Special Planning Area.[2]

Off-site Improvement Area

Within Butte County, the unincorporated portion of the off-site improvement area and surrounding areas are zoned as AG-40.

Surrounding Areas

Surrounding zoning consists of "R1 Low Density Residential," "R2 Medium Density Residential," and "R3 Medium-High Density Residential," to the northwest, "R1 Low Density Residential," and "CN Neighborhood Commercial" to the northeast, and "R1 Low Density Residential," and "ML Light Manufacturing" to the east. The UPRR mainline is to the southwest and does not have a City land use designation.

Lands directly south of the BYSP Area, located within unincorporated Butte County, are zoned AG-40 under the County Code.

Historic Remediation

In 1991, California Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment Determination for the BYSP Area, identifying elevated concentrations of arsenic in soils and pentachlorophenol (PCP) in groundwater, related to the past industrial uses of the BYSP Area and the adjacent railroad. In response, under DTSC's oversight, arsenic-contaminated soil was identified and contaminated groundwater was pumped and treated. Contaminated soils were consolidated on-site in the southern portion of the BYSP Area and remain capped under approximately 3 acres of asphalt, referred to as the "asphalt cap" (Exhibit 2-3).[3] The asphalt cap has been historically and continues to be monitored in perpetuity by DTSC, and future uses on the asphalt cap would be restricted to open space, ancillary surface parking uses as well as any other uses permitted by DTSC. More information on the historic remediation of the BYSP Area can be found in Section 3.9, Hazards and Hazardous Materials, of this Draft EIR.

[1] California Department of Conservation. 2022. California Important Farmland Finder. Website: https://maps.conservation.ca.gov?DLRP/CIFF/. Accessed December 10, 2024.

[2] City of Chico. 2022. Municipal Code, Chapter 19.40.030 Special Planning Area. Website: https://codelibrary.amlegal.com/codes/chico/latest/chico_ca/0-0-0-15850. Accessed December 10, 2024.

[3] Environmental Assessment and Finding of No Significant Impact (FONSI) for the Barber Debris Temporary Handling Facility 2018 California Wildfire. Prepared by the United States Army Corps of Engineers. December 4, 2018.

3.11.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to land use and planning are relevant to this analysis.

State

No State plans, policies, regulations, or laws related to land use and planning are relevant to this analysis.

Regional

2020 Regional Transportation Plan/Sustainable Communities Strategy for Butte County

SB 375 (Sustainable Communities and Climate Protection Act) is a State law focused on demonstration the integration of land use, housing, and transportation to reduce passenger vehicle (cars and trucks) greenhouse gas (GHG) emissions. As the Metropolitan Planning Organization (MPO) for Butte County, Butte County Association of Governments (BCAG) has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) required pursuant to SB 375, which specifies policies, projects and programs necessary over a 20+ year period to maintain, manage and improve the region's transportation system. The 2020 RTP/SCS (which is the current, adopted RTP/SCS) covers the 20-year period between 2020 and 2040.

The 2020 RTP/SCS provides a foundation for the development of:

- Federal Transportation Improvement Program
- Regional Transportation Improvement Program
- Interregional Transportation Improvement Program

The 2020 RTP/SCS has four main elements:

- **Policy Element**–Goals, policies, and objectives
- **Action Element**–Recommended projects by mode and funds source
- **Financial Element**–Financial projections by fund source
- **Sustainable Communities Strategy**–Integration of land use, housing, and transportation to reduce GHGs

BCAG has initiated the development of the 2024 Sustainable Communities Strategy to be included with the 2024 Regional Transportation Plan, although as of the time that environmental review commenced for the proposed project, it had not yet been finalized and adopted.

Local

City of Chico

General Plan

The Chico 2030 General Plan was adopted in 2011 by the Chico City Council and serves as a "blueprint" for future land use and development activities that occur within the Chico city limits. The

2030 General Plan comprises the following elements: Sustainability; Land Use; Circulation; Community Design; Downtown; Economic Development; Housing; Parks, Public Facilities, and Services; Open Space and Environment; Cultural Resources and Historic Preservation; Safety; and Noise. Each General Plan Element sets forth a hierarchy of goals, policies, and actions intended to implement the planning objectives of the General Plan.

Following are the goals and policies from the City's General Plan that are relevant to this analysis.[4]

Goal LU-1 Reinforce the City's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.

Policy LU-1.1 **Planning Area**–Support coordinated land use planning for the Chico Planning Area.

Policy LU-1.2 **Growth Boundaries/Limits**–Maintain long-term boundaries between urban and agricultural uses in the west[5] and between urban uses and the foothills in the east, and limit expansion north and south to produce a compact urban form.

Policy LU-1.3 **Growth Plan**–Maintain balanced growth by encouraging infill development where City services are in place and allowing expansion into Special Planning Areas.

Goal LU-2 Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.

Policy LU-2.1 (Planning for Future Housing and Jobs)–Maintain an adequate land supply to support projected housing and job needs for the community.

Policy LU-2.3 **Sustainable Land Use Pattern**–Ensure sustainable land use patterns in both developed areas of the City and new growth areas.

Policy LU-2.6 **Agricultural Buffers–**Require buffering for new urban uses along the City's Sphere of Influence boundary adjacent to commercial crop production. Landscaping, trails, gardens, solar arrays, and open space uses are permitted within the buffer. Design criteria for buffers are as follows:

- A minimum 100-foot-wide physical separation, which may include roadways, pedestrian/bicycle routes, and creeks, between the agricultural use and any habitable structure.
- Incorporate vegetation, as may be needed, to provide a visual, noise, and air quality buffer.

[4] The General Plan goals and policies that are applicable to other resource areas are listed and discussed in their corresponding sections of this Draft EIR and are included in Table 3.11-2.

[5] The long-term urban growth boundary between Chico and agricultural uses to the west is called the "Greenline." According to the Chico 2030 General Plan, the Greenline was established in 1982 by Butte County and the City of Chico, separating the Chico Urban area from prime agricultural soils to the west. (p. 3-6)

Policy LU-2.7 **General Plan Consistency Requirement**–Ensure consistency between the General Plan and implementing plans, ordinances, and regulations.

Goal LU-3 Enhance existing neighborhoods and create new neighborhoods with walkable access to recreation, places to gather, jobs, daily shopping needs, and other community services.

Goal LU-4 Promote compatible infill development.

Policy LU-4.2 **Infill Compatibility**–Support infill development, redevelopment, and rehabilitation projects that are compatible with surrounding properties and neighborhoods.

Policy LU-4.4 **Positive Contributions**–Encourage infill development that provides missing neighborhood elements, such as neighborhood retail, enhanced architectural quality, and circulation improvements for pedestrians, bicycles and vehicles, or that otherwise contributes positively to existing neighborhoods.

Goal LU-6 Comprehensively plan the Special Planning Areas to meet the City's housing and jobs needs.

Policy LU-6.1 **Special Planning Area Designation**–To meet the City's growth needs, support development in the following five Special Planning Areas:

- Bell Muir
- Barber Yard
- Doe Mill/Honey Run
- North Chico
- South Entler

Policy LU-6.2 **Special Planning Area Implementation**–Allow flexibility when planning the Special Planning Areas in order to meet changing community housing and jobs needs.

Municipal Code

The Chico Municipal Code regulates land use and development activities within the City limits. Title 19 (Land Use and Development Regulations) contains the Zoning Ordinance, which establishes zoning districts, allowable land use activities, and development standards.

Chico Municipal Code Chapter 19.28, Planned Development, promotes and encourages flexibility in the application of standards for site planning and property development in order to encourage the development of affordable housing, to protect public health and safety, ensure General Plan consistency, protect the environment, and to provide open spaces.

Chico Municipal Code Chapter 19.32, Development Agreements, outlines the procedures and minimum requirements for the review and consideration of development agreements upon application by, or on behalf of, property owners, the Commission, or Council.

Chico Municipal Code Chapter 19.36, Specific Plans, establishes uniform procedures for the adoption and implementation of specific plans for the coordination of future development within the City.

Chico Municipal Code Chapter 19.40.030, Special Planning Areas, states that all zoning districts may be compatible with the Special Planning Area General Plan designation if the zoning district is adopted as part of a specific plan or other comprehensive master plan for a Special Planning Area.

Chico Bicycle Plan 2019 Update

The *Chico Bicycle Plan 2019 Update*[6] establishes goals and objectives for recreational and transportation-related bicycle use in Chico. The plan identifies future on- and off-street bicycle facility improvements. The following planned bike facilities are identified in the study area:

- **Class I Bike Paths:**
  - Along Big Chico Creek from the existing path to Pomona Avenue
  - Along MacIntosh Avenue and crossing the UPRR tracks to Estes Road south of the BYSP Area
- **Class II Bike Lanes:**
  - On Ivy Street between West 22nd Street and Meyers Street
- **Class III Bike Boulevards:**
  - On Ivy Street from 9th Street into the BYSP Area
  - On Chestnut Street between West 2nd Street and 20th Street
  - On Salem Street between Big Chico Creek and 20th Street
  - Along the entirety of 16th Street
  - On 20th Street from Park Avenue into the BYSP Area
  - Along Normal Avenue/Estes Road between 20th Street and the Comanche Creek Trail
- **Class IV Protected Bike Lanes:**
  - On Park Avenue from Humboldt Avenue to 20th Street

Chico Climate Action Plan Update

The Climate Action Plan Update was developed to create a plan for a safer and more resilient future in the face of severe weather and natural disasters, droughts, wildfires, and flooding, which are all projected to worsen across the State due to climate change. The plan includes specific actions to reduce greenhouse gas (GHG) emissions (including carbon dioxide, methane, and nitrous oxide emissions) and achieve the City's target of carbon neutrality by 2045.[7]

Park and Recreation Master Plan Update

The Chico Area Recreation and Park District (CARD) has identified areas of park and recreation needs within the community, and subsequently created innovative solutions to ensure that the greater Chico area continues to be a place that people have a desire to live, work, and play. This plan has been created to be used as a road map for improvements, new facilities, expanded programming, and new recreation opportunities for the community.

[6] City of Chico. 2019. Chico Bicycle Plan 2019 Update. April.
[7] City of Chico. 2021. Climate Action Plan Update.

3.11.4 - Methodology

FirstCarbon Solutions (FCS) reviewed the Chico 2030 General Plan and the Chico Zoning Ordinance to determine applicable policies that apply to the proposed project.

3.11.5 - Thresholds of Significance

The City, as lead agency, in its discretion has determined to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether the proposed project would result in significant land use and planning impacts. Would the proposed project:

a) Physically divide an established community?
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

It should be noted that the significance criteria Impact(b), above, is also separately analyzed in Section 3.11, Noise, to address potential impacts related to noise conflicts with land use plans, which would include project-related conflicts to the noise land use compatibility standards of the General Plan and Municipal Code.

3.11.6 - Project Impacts Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides feasible mitigation measures where necessary.

Divide an Established Community

Impact LAND-1: The proposed project would not physically divide an established community.

Impact Analysis

Implementation of the proposed project would have a significant environmental impact if it were configured in such a way as to create a physical barrier or other physical division within an established community. The physical division of an already established community typically refers to construction of a linear feature, such as an interstate, railroad tracks, or the removal of a means of access that would impact mobility within an existing community and an outlying area.

The BYSP Area, which is within a SPA identified for future growth in the City's General Plan, is located adjacent to the existing Barber Neighborhood. The BYSP Area is an infill site in an urbanized area, is predominantly vacant, and is surrounded by existing residential development to the north and northeast.

As illustrated in Exhibit 2-6, the proposed project would involve the extensions of Ivy Street and 16th Street, both of which would serve as primary access points, connecting the BYSP Area to the existing communities to the north and northeast east of the BYSP Area. Other constructed streets would include the new connections at West 14th Street, West 18th Street, and West 20th Street (Exhibit 2-6).

The proposed project has been designed to be an extension of the existing Barber Neighborhood, would connect to part of the neighborhood adjacent to the BYSP Area, and would not physically divide an established community. The development of the proposed project would not involve construction of any type of linear feature that could impair mobility within the existing community, nor would it remove a means of access in a manner that could impede travel or otherwise constitute a physical division of the established community. Furthermore, the proposed project would be required to be designed and implemented in accordance with relevant General Plan and BYSP goals and policies, which would further help to ensure a cohesive, integrated site and circulation plan, and which would provide ready access to nearby transportation corridors. The impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact LAND-2:	**The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.**

Impact Analysis

This impact evaluates the proposed project's consistency with the applicable goals and policies set forth in the Chico 2030 General Plan.

Land Use Designations under City and County General Plan

The BYSP Area is designated as SPA-2–Barber Yard by the Chico General Plan. The SPA designation identifies areas for significant new growth that require subsequent comprehensive planning and are to be developed as connected and complete neighborhoods with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. The General Plan identifies a mix of desired land uses within the SPA-2–Barber Yard, including LDR, MDR, MHDR, HDR, RMU, "Office Mixed Use," "Industrial/Office Mixed Use," POS, CMU, and SOS. The proposed project would develop a diverse range of housing types with a mix of commercial, recreational and open space uses. Proposed land use designations within the BYSP Area, as detailed more fully in the Specific Plan, would consist of MDR, MHDR, RMU, POS and SOS. These proposed land uses are consistent with those envisioned by the General Plan for the SPA-2—Barber Yard land use designation, as listed above.

Depending on the location within the BYSP Area, the proposed project would support residential density ranges from 4 to 35 units per gross acre. As described more fully in Chapter 2, Project

Description, the proposed project also involves the installation of off-site improvements to serve the proposed project, including an approximately three- to five-acre combination water quality retention/detention basin (stormwater basin), related access drive from Estes Road, and an associated storm drain alignment would be constructed to connect the BYSP Area and stormwater basin to a new outfall to Comanche Creek.[8] The foregoing off-site stormwater detention pond is proposed on land currently located within the jurisdiction of Butte County, designated by the Butte County General Plan as AG. [9] As stated in Chapter 24 (Zoning) of the County Code of Ordinances, the AG designation allows a range of agricultural uses including livestock grazing, animal husbandry, intense animal uses, and animal matter processing. Utility facilities are allowed in the corresponding AG zoning designation, subject to use permit or minor use permit requirements.[10]

However, since the storm drainage facility in the off-site improvement area is intended to be owned and maintained by the City of Chico, it is likely that the City will pursue an extra-territorial acquisition of the parcel pursuant to Government Code Section 37351, without annexation, and operate the facility to its standards. Maintaining the County parcel as a long-term storm drainage facility without annexation would help reinforce the jurisdictional boundaries that coincide with the Greenline, a long-term City-County boundary that protects valuable farmlands along the westerly side of Chico.

Relevant Land Use Goals and Policies in the BYSP

In accordance with the SPA-2 land use designation and related zoning, the proposed project involves the adoption of the Specific Plan. The purpose of this planning and regulatory document is to comprehensively plan the BYSP Area, as contemplated by the SPA-2 designation. Development within the BYSP Area would be required to adhere to all applicable goals, policies, standards, requirements and guidelines set forth in the Specific Plan in implementing each specific individual development proposal.

The vison of the BYSP is to redevelop the BYSP Area as a new mixed-use neighborhood. The following principles guide and direct the land use vision of the BYSP. For purposes of this analysis, the following BYSP objectives are relevant:

- Develop the BYSP as an extension of the Barber Neighborhood.
- Preserve and celebrate the BYSP Area rich history to foster a strong sense of place.
- Direct development in proximity to and with connections to the existing Barber Neighborhood, Downtown, and Chico State, supporting density over sprawl.
- Create a wide range of housing opportunities and choices that are generally smaller than the average unit size in Chico and focused on providing options to broad sections of the community.
- Create walkability throughout the BYSP Area and into the surrounding neighborhood.

[8] There is no existing access to or from the decommissioned UPRR spur parcel between the BYSP Area and off-site improvement area. Temporary access across the parcel would be required for construction of the stormwater basin and would reduce construction traffic on the southern portion of Estes Road.

[9] Butte County. 2023. Butte County General Plan 2040. Land Use Element.

[10] Butte County. 2024. Butte County Code of Ordinances, Chapter 24 – Zoning.

- Mix land uses to encourage a central social hub for new residents, the broader neighborhood, and the Chico community.

City General Plan Consistency Analysis

Table 3.11-2, City General Plan Consistency Analysis, assesses project consistency with the goals and policies of the Chico 2030 General Plan relevant for purposes of this impact analysis. As shown in the table, the proposed project is consistent with all relevant goals and policies.

Table 3.11-2: City General Plan Consistency Analysis

Goal/Policy No.	Consistency Determination
Sustainability	
Goal SUS-1: Balance the environment, economy and social equity, as defined in the General Plan, to create a sustainable Chico.	**Consistent:** The proposed project would be implemented via a Specific Plan that would provide for a comprehensively planned, mixed use community with a range of housing types, as well as commercial, recreational and open space uses. The proposed project involves adaptive reuse of existing structure(s), consisting of the potential conversion of up to approximately 150,000 square feet of future commercial and recreational uses. In addition, the proposed project proposes an additional 60,000 square feet of new commercial uses. It would create additional jobs (both temporary construction and permanent), taxable sales, and commercial retail opportunities. The Specific Plan also contemplates a variety of potential future park, recreational and open space amenities, totaling approximately 15.8 acres, available to serve project residents, employees, and visitors as well as the broader Chico community. The proposed project would take advantage of the adjacent Barber Neighborhood's existing gridded street system to provide opportunities for a high level of pedestrian and bicycle accessibility and connectivity with multiple direct travel paths between destinations, including multiuse paths, sidewalks, and paseos. These characteristics are consistent with the goal of balancing the environment, economy, and social equity.
Policy SUS-1.1 (General Plan Consistency): Ensure proposed development projects, policies, and programs are consistent with the General Plan.	**Consistent:** As indicated in this table and otherwise throughout this Draft EIR, the proposed project is consistent with all applicable goals, policies, and provisions of the Chico 2030 General Plan.
Goal SUS-4: Promote green development.	**Consistent:** As detailed more fully in Sections 2.0 (Project Description) and 3.8 (Greenhouse Gas Emissions), the proposed project would be developed on an infill site in an urban area near regional routes of travel, public transit, and Downtown Chico.

Goal/Policy No.	Consistency Determination
	As detailed in the Specific Plan, the proposed project would include sustainable design features. For example, the proposed project would incentivize the use of electric vehicles (EVs) by including EV charging infrastructure. It would incorporate solar panels and would be required to comply with the latest adopted energy efficiency, water conservation, and stormwater management laws and regulations. Furthermore, the proposed project would significantly restrict its usage of natural gas (pursuant to applicable mitigation measure(s) set forth Section 3.6, Energy) and would utilize energy-saving technologies. Refer to Section 3.6, Energy and Section 3.8, Greenhouse Gas Emissions, for more information.
Policy SUS-4.2 (Water Efficient Landscaping): Promote drought-tolerant landscaping.	**Consistent:** As described more fully in the Specific Plan, the proposed project would be required to include drought-tolerant landscaping where feasible. Landscaping would be required to meet the applicable requirements pursuant to the City's implementation of State Water Efficient Landscape Ordinance (AB 1881).
Policy SUS-4.3 (Green Development Practices): Promote green development practices in private projects.	**Consistent:** See also Consistency Determination for Goal SUS-4, above. The proposed project would be subject to the energy and water efficiency standards set forth in the California Green Building Standards Code and Chico Municipal Code. The proposed project would significantly restrict its usage of natural gas (pursuant to applicable mitigation measure(s) set forth Section 3.6, Energy) and utilize energy-saving technologies. Refer to Section 3.6, Energy and Section 3.8, Greenhouse Gas Emissions, for more information.
Goal SUS-5: Increase energy efficiency and reduce nonrenewable energy and resource consumption citywide.	**Consistent:** See also Consistency Determination for Goal SUS-4, above. The proposed project would be subject to the then-current, stringent energy efficiency standards set forth in the California Green Building Standards Code. Collectively, these features are consistent with the goal of increasing energy efficiency and reducing nonrenewable energy consumption.
Policy SUS-5.2 (Energy Efficient Design): Support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.	**Consistent:** See also Consistency Determination for Goal SUS-4, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would include sustainable design features. For example, the proposed project would include EV charging infrastructure to incentivize the use of EVs. It would incorporate solar panels, and be required to comply with the then-current, stringent energy efficiency standards set forth in the California Green Building Standards Code, which is consistent with the policy of supporting the inclusion of energy-efficient design in private projects. Moreover, the proposed project would significantly

Goal/Policy No.	Consistency Determination
	restrict its usage of natural gas (pursuant to applicable mitigation measure(s) herein) and utilize energy-saving technologies. Refer to Section 3.6, Energy and Section 3.8, Greenhouse Gas Emissions, for more information.
Action SUS-5.2.1 (Integration of Energy Efficiency Technology): Utilize City incentives identified in Action LU-2.3.1 to encourage the integration of energy efficiency measures and renewable energy devices, in addition to those required by the State, during early project review.	**Consistent:** See also Consistency Determination for Goal SUS-4, above. The proposed project would be located on an infill site in an urbanized area near existing major transportation corridors, public transit, various pedestrian and bicycle facilities, and downtown Chico. It would be subject to the then-current, stringent energy and water efficiency standards set forth in the California Green Building Standards Code and Chico Municipal Code. The proposed project would significantly restrict its usage of natural gas (pursuant to applicable mitigation measure(s)) and utilize energy-saving technologies. Refer to Section 3.6, Energy and Section 3.8, Greenhouse Gas Emissions, for more information.
Goal SUS-6: Reduce the level of greenhouse gas emissions citywide.	**Consistent:** See also Consistency Determinations for Policy SUS-5.2 and Action SUS-5.2.1, above. This Draft EIR evaluates the proposed project's potential impacts with respect to greenhouse gas emissions and has determined that the proposed project would have less than significant impacts in this regard. The proposed design features would reduce overall per capita energy consumption. In addition, the Specific Plan incorporates a number of features that would help facilitate achievement of the energy conservation goals and related reduction of GHGs. Furthermore, the proposed project would be required to adhere to all applicable goals and policies of the General Plan and the City's Updated Climate Action Plan (CAP) as well as applicable Municipal Code/Green Building Standards. Refer to Section 3.6, Energy, and Section 3.8, Greenhouse Gas Emissions for further discussion.
Policy SUS-6.3 (Greenhouse Gas Emissions and CEQA): Analyze and mitigate potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.	**Consistent:** See also Consistency Determination for Goal SUS-6, above. This Draft EIR evaluates the proposed project's potential greenhouse gas emissions and has determined that there would be less than significant impacts (with mitigation) in this regard. Refer to Section 3.8, Greenhouse Gas Emissions for further discussion.
Policy SUS-6.4 (Community Trees): Continue to support the planting and maintenance of trees in the	**Consistent:** As discussed more fully in Chapter 2, Project Description, of this Draft EIR as well as the Specific Plan, the proposed project would

Goal/Policy No.	Consistency Determination
community to increase carbon sequestration.	plant and maintain significant numbers of street trees and other landscaping on-site, which would be increase carbon sequestration.
Goal SUS-7: Support local food systems in Chico.	**Consistent:** The proposed BYSP includes open space elements that can accommodate local farm-to-fork food systems by providing potential located for Farmer's Markets at the Barber Pop-Up and the Square open space elements. The proposed project would also host temporary events within the Barber pop-up that would include food sales.
Land Use	
Goal LU-1: Reinforce the City's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.	**Consistent:** See also Consistency Determinations for Goals SUS-1, SUS-4, above. The proposed project is located on an infill site that is predominantly vacant, which has long been identified by the City as a new growth area. It is adjacent to existing residential development within the existing Barber Neighborhood. It involves a thoughtful, comprehensive site plan with a range of density levels within a compact, urban form. Thus, development within the BYSP Area would be consistent with the goal of promoting compact urban form.
Policy LU-1.1 (Planning Area): Support coordinated land use planning for the Chico Planning Area.	**Consistent:** See also Consistency Determinations for Goals SUS-1, LU-1, above. By specifying the zoning, development regulations, public infrastructure standards, and recreational elements within the 133-acre site, the proposed project represents a coordinated land use planning effort for an identified City growth area. The proposed project would be reviewed, at a minimum, by City staff, the Architectural Review and Historic Preservation Board, the Planning Commission, and/or the City Council. Other federal, State, local, and regional agencies would have the opportunity to review and comment on the proposed project, as appropriate and within these agencies' respective jurisdictional authority. This is consistent with the policy of supporting coordinated land use planning for the Chico Planning Area.
Policy LU-1.2 (Growth Boundaries/Limits): Maintain long-term boundaries between urban and agricultural uses in the west and between urban uses and the foothills in the east, and limit expansion north and south to produce a compact urban form.	**Consistent:** See also Consistency Determinations for Goals SUS-1, SUS-4, LU-1 above. The proposed project would be developed on an infill site that is predominantly vacant, and which has long been identified by the City as an appropriate location for significant new growth. The off-site stormwater basin is proposed to be owned and operated by the City of Chico, without annexing the underlying site, to avoid extending City limits past the Greenline. Dedicating the parcel for the stormwater basin to such a long-term use will remove it from

Goal/Policy No.	Consistency Determination
	future development potential, reducing pressure to develop urban uses on the west of the Greenline. Development within the BYSP Area is planned for within the General Plan and would not lead to unplanned expansion or urban sprawl. Thus, development within the BYSP Area would be consistent with the goal of promoting compact urban form.
Action LU-1.2.1 (Greenline): Retain the Greenline.	**Consistent:** See also Consistency Determinations for Goals SUS-1, SUS-4, LU-1 above. The proposed project would retain the Greenline by using the parcel south of the BYSP Area for long-term drainage purposes, without annexation, reinforcing the jurisdictional boundaries that coincide with the Greenline.
Policy LU-1.3 (Growth Plan): Maintain balanced growth by encouraging infill development where City services are in place and allowing expansion into Special Planning Areas.	**Consistent:** See also Consistency Determinations for Goals SUS-1, SUS-4, LU-1 above. The proposed project would be developed on an infill site that is predominantly vacant and would be in a location long planned by the City for new growth. It is adjacent to existing residential development within the existing Barber Neighborhood, and near existing utility and roadway infrastructure and services. The BYSP Area is designated as a Special Planning Area, specifically SPA-2—Barber Yard and its development is planned for in the General Plan. As such, it is consistent with the policy of promoting infill development and expansion into Special Planning Areas.
Goal LU-2: Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.	**Consistent:** See also Consistency Determination for Goal SUS-1, above. The proposed project would provide for a range of housing types (including single- and multi-family, with a range of densities), as well as commercial, recreational, and open space uses. As such, developing the proposed project would be consistent with the goal of providing a mix and distribution of uses that the identified needs of the community.
Policy LU-2.1 (Planning for Future Housing and Jobs): Maintain an adequate land supply to support projected housing and job needs for the community.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-2, above. The proposed project would involve the construction of a maximum of 1,250 housing units (with a range of housing types and densities) in addition to commercial, recreational and open space uses. Thus, it would facilitate achievement of the City's jobs-housing balance and be consistent with the policy of maintaining an adequate land supply to support projected housing and job needs. Refer to Section 3.13, Population and Housing, for more discussion about the project's effects on Chico's jobs-housing balance.

Goal/Policy No.	Consistency Determination
Policy LU-2.3 (Sustainable Land Use Pattern): Ensure sustainable land use patterns in both developed areas of the City and new growth areas.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-2 and Policy LU-1.2, above. The BYSP provides for a sustainable land use pattern within the subject new growth area by zoning the majority of the site R2 (Medium Density Residential), as opposed to R1 (Low Density Residential, which the most common zoning district in Chico), and by zoning large portions of the site R3 (Medium-High Density Residential) and RMU (Residential Mixed-Use), which support higher residential densities and mixed use development types. This zoning pattern supports efficient, more-sustainable use of land over conventional zoning patterns. This Draft EIR evaluates land use compatibility and the related issue of sustainable land use patterns throughout relevant environmental topic areas, including aesthetics, agriculture and forestry resources, hazardous materials, noise, population and housing, and transportation impacts (including with respect to same on surrounding land uses), and provides feasible mitigation where appropriate. This is consistent with the policy of ensuring sustainable land use patterns in developed areas of the City.
Policy LU-2.4 (Land Use Compatibility): Promote land use compatibility through use restrictions, development standards, environmental review and special design considerations.	**Consistent:** See also Consistency Determination for Policy LU-1.3, above. This Draft EIR evaluates land use compatibility throughout relevant environmental topic areas, including aesthetics, agriculture and forestry resources, hazardous materials, noise, and traffic impacts on surrounding land uses, and provides feasible mitigation measures where appropriate. This is consistent with the policy of promoting land use compatibility.
Policy LU-2.6 (Agricultural Buffers): Require buffering for new urban uses along the City's Sphere of Influence boundary adjacent to commercial crop production. Landscaping, trails, gardens, solar arrays, and open space uses are permitted within the buffer. Design criteria for buffers are as follows: • A minimum 100-foot-wide physical separation, which may include roadways, pedestrian/bicycle routes, and creeks, between the agricultural use and any habitable structure. • Incorporate vegetation, as may be needed, to provide a visual, noise, and air quality buffer.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-2 and Policy LU-1.2, above. The proposed project is near, but not along the City's Sphere Of Influence (SOI) boundary adjacent to commercial crop production. The nearest such crop production occurs on the west side of the UPRR mainline, over 250 feet away, which meets this policy's minimum agricultural buffer of 100 feet. The project would incorporate buffering between the project boundary and the agricultural uses located to the west of the BYSP Area in the form of 8- to 10-foot metal fencing and a 15-foot vegetated corridor, which would serve to help buffer against visual, noise, and air quality related concerns associated with agricultural uses.

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Goal LU-4: Promote compatible infill development.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-2 and Policy LU-1.2, above. The proposed project would be located on an urban, infill site. The BYSP Area is predominantly vacant, has long been planned for significant new growth as part of the City's land use vision for this area, and is located adjacent to the existing Barber Neighborhood. The proposed project would promote infill development through the construction of a comprehensively planned, thoughtfully designed mix of residential, commercial, recreational, and open space uses. The mix of uses would take into appropriate account land use compatibility considerations as detailed in the Specific Plan and would be consistent with the land uses envisioned by the General Plan for the SPA-2—Barber Yard land use designation. Moreover, this Draft EIR evaluates land use compatibility throughout relevant environmental topic areas, including agriculture and forestry resources, aesthetics, hazardous materials, noise, and traffic impacts (including taking into appropriate account same on surrounding land uses), and provides feasible mitigation measures where appropriate. This is consistent with the goal of promoting land use compatibility.
Policy LU-4.1 (Promote Infill and Redevelopment): Facilitate infill development through education and the provision of infrastructure and services.	**Consistent:** See also Consistency Determinations for Goals SUS-1, LU-2, LU-4 and Policy LU-1.2, above. The proposed project would be located on an urban, infill site. The BYSP Area is predominantly vacant and located adjacent to existing Barber Neighborhood and has long been planned for significant new growth. The BYSP Area is near existing infrastructure and services, facilitating provision to the proposed project of same. The proposed project would include a mix of residential, commercial, recreational, and open space uses. Given its location, the BYSP Area has ready access to adequate public services and infrastructure. Refer to Section 3.14, Public Services, and Section 3.17, Utilities and Service Systems, for further discussion.
Policy LU-4.2 (Infill Compatibility): Support infill development, redevelopment, and rehabilitation projects that are compatible with surrounding properties and neighborhoods.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-2 and Policy LU-1.2, above. The proposed project would be located on an urban, infill site that aims to be an extension of the existing Barber Neighborhood. The proposed project has been comprehensively planned and thoughtfully designed, taking into appropriate account land use compatibility concerns, as detailed more fully in the Specific Plan; it would include a mix of residential, commercial, recreational, and open space uses. This Draft EIR evaluates land use compatibility throughout relevant environmental topic areas including agriculture and forestry resources, aesthetics, hazardous materials, land use, noise, and transportation impacts (including appropriate

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	consideration of same with respect to surrounding land uses), and provides feasible mitigation where appropriate. This is consistent with the goal of supporting infill development, redevelopment, and rehabilitation projects that are compatible with surrounding properties and neighborhoods.
Goal LU-6: Comprehensively plan the Special Planning Areas to meet the City's housing and jobs needs.	**Consistent:** See also Consistency Determination for Goal SUS-1, above. In accordance with its SPA-2 land use designation, the proposed project has been comprehensively planned via a Specific Plan and would include a thoughtful mix of uses including up to 1,250 dwelling units, along with commercial, recreational, and open space uses, and would create new jobs within a Special Planning Area (SPA). As such, the proposed project would be comprehensively planned to contribute to the City's housing and jobs needs.
Policy LU-6.1: (Special Planning Area Designation)–To meet the City's growth needs, support development in the following five Special Planning Areas: • Bell Muir • Barber Yard • Doe Mill/Honey Run • North Chico • South Entler	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-6, above. The proposed project, which would be located on land designated by the City's General Plan as SPA-2 (Barber Yard), consists of the development of the BYSP Area with a mix of uses, as detailed in the Specific Plan.
Policy LU-6.2: (Special Planning Area Implementation)–Allow flexibility when planning the Special Planning Areas in order to meet changing community housing and jobs needs.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-6 and Policy LU-6.1, above. The proposed project has been thoughtfully designed to incorporate sufficient flexibility, which would involve development of a mix of uses, including up to 1,250 dwelling units as well as commercial, recreational and open space uses, thereby helping to support the City's jobs-housing balance and creating new jobs within a Special Planning Area. As such, the proposed project would contribute to the City's housing and jobs needs through a flexible planning process.
Circulation	
Goal CIRC-1: Provide a comprehensive multimodal circulation system that serves the buildout of the Land Use Diagram and provides for the safe and effective movement of people and goods.	**Consistent:** See also Consistency Determinations for Goals SUS-1 and LU-6 and Policy LU-6.1, above. The proposed project, as detailed in Chapter 2, Project Description, of this Draft EIR and the Specific Plan, incorporates a comprehensive, multimodal circulation system to serve the contemplated mix of uses envisioned by the City's SPA-2 land use designation.

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	This Draft EIR evaluates the proposed project's potential impacts with respect to the circulation system, including roadways, public transit, bicycles, and pedestrians, and sets forth feasible mitigation measures to reduce impacts. This is consistent with the goal of providing a comprehensive, multimodal circulation system that serves the buildout of the Land Use Diagram and provides for the safe and effective movement of people and goods. Refer to Section 3.16, Transportation for further discussion.
Policy CIRC-1.1 (Transportation Improvements): Safely and efficiently accommodate traffic generated by development and redevelopment associated with buildout of the General Plan Land Use Diagram.	**Consistent:** See also Consistency Determination for Goal CIRC-1, above. This Draft EIR evaluates the proposed project's potential impacts with respect to the local roadway system to the extent required under CEQA and sets forth feasible mitigation measures to reduce impacts. In addition, a detailed non-CEQA, operational analysis has been prepared to address various intersection- and roadway segment-related operational concerns, consistent with relevant General Plan policies. Both of the foregoing analyses take into consideration General Plan buildout as part of the cumulative analysis. This is consistent with the policy of safely and efficiently accommodating traffic generated by development. Refer to Section 3.16, Transportation as well as the non-CEQA Operational Analysis (Appendix J) for further discussion.
Action CIRC-1.1.1 (Road Network): Enhance existing roadways and intersections and develop the roadway system shown in Figure CIRC-1 (Roadway System Map) over the life of the General Plan as needed to accommodate development.	**Consistent:** See also Consistency Determinations for Goal CIRC-1 and Policy CIRC-1.1, above. The proposed project would build on the historic grid system in the adjacent Barber Neighborhood. This grid system would be designed in coordination with Figure CIRC-1 and would be consistent with the roadway design within it in order to accommodate the planned growth for the SPA-2 designation.
Policy CIRC-1.2 (Project-level Circulation Improvements): Require new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian, and bicycle facilities.	**Consistent:** See also Consistency Determination for Goal CIRC-1, above. As discussed more fully in Chapter 2, Project Description, of this Draft EIR and the Specific Plan, as part of the proposed project, Ivy Street and West 16th Street would be extended and serve as primary access points to the proposed project. In addition, new connections of West 14th Street, West 18th Street, West 20th Street, and Estes Road are proposed to serve the proposed mix of uses. Furthermore, circulation plans for the proposed project include the installation and/or enhancement (and/or funding thereof) of numerous pedestrian and bicycle connections and facilities, both on- and off-site. Finally, the proposed project would be required to pay all applicable transportation-related impact fees. Refer to Section 3.16, Transportation for further discussion.

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Policy CIRC-1.3 (Citywide Circulation Improvements): Collect the fair share cost of circulation improvements necessary to address cumulative transportation impacts, including those to State highways, local roadways, and transit, pedestrian and bicycle facilities, through the City's development impact fee program.	**Consistent:** See also Consistency Determinations for Goal CIRC-1 and Policy CIRC-1.2, above. The applicant for each specific individual development proposal would be required to pay all applicable transportation-related fees at the time building permits are sought to mitigate identified (including individual and cumulative) impacts. Refer to Chapter 2, Project Description, and Section 3.16, Transportation for further discussion.
Policy CIRC-1.5 (Vehicle Miles Traveled Analysis): Consistent with State law, implement Vehicle Miles Traveled (VMT) assessments as part of the environmental review process under CEQA.	**Consistent:** A VMT assessment was prepared for the proposed project. Refer to Section 3.16, Transportation for further discussion.
Action CIRC-1.5.1 (VMT CEQA Analysis): For projects that require a full traffic analysis as part of the CEQA review process, perform a VMT analysis consistent with the California Office of Planning and Research CEQA Guidelines.	**Consistent:** As discussed in this Draft EIR, a full traffic and VMT analysis was performed for the proposed project. For further information, see Section 3.16, Transportation.
Goal CIRC-2: Enhance and maintain mobility with a complete streets network for all modes of travel.	**Consistent:** See also Consistency Determinations for Goal CIRC-1 and Policy CIRC-1.2, above. As discussed below (see Impact LAND-1) and in more detail in Chapter 2, Project Description, of this Draft EIR and the Specific Plan, the proposed project would enhance and maintain mobility with a complete streets network for all modes of travel. Among other things, the proposed project would improve connectivity between the BYSP Area and the surrounding Barber Neighborhood. The proposed project would extend Ivy Street, West 16th, West 14th, West 18th, West 20th Streets, and Estes Road, and would also include numerous pedestrian and bicycle connections (by, for example, installing new facilities, enhancing existing ones, and providing additional funding to City to accomplish same in the project vicinity). This would be consistent with complete streets principles.
Policy CIRC-2.1 (Complete Streets): Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 and CIRC-2, above. As discussed more fully in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, the proposed project has incorporated an integrated, multimodal circulation system, including numerous bicycle and pedestrian connections/pathways and incorporates a range of transportation demand management strategies and

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	designs for reducing the adverse effect of personal vehicle use. Refer to Section 3.3, Air Quality, Section 3.6, Energy, Section 3.8, Greenhouse Gas Emissions, and Section 3.16, Transportation for further discussion.
Action CIRC-2.1.3 (Multimodal Connections): Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.	Consistent: As described above, the proposed project would include expanded infrastructure for bicycles, transit, pedestrians, and would mirror the grid system in the surrounding Barber Neighborhood. As such, the proposed project would be integrated into the surrounding neighborhood and would provide several connections between and within it.
Policy CIRC-2.2 (Circulation Connectivity and Efficiency): Provide greater street connectivity and efficiency for all transportation modes.	Consistent: The proposed project would promote alternative transportation such as walking and biking. Additionally, customers and visitors as expected to exhibit shorter trip lengths due the City's efficient land use pattern. Refer to Section 3.6, Energy, for further discussion.
Action CIRC-2.2.1 (Connectivity in Project Review): New development shall include the following internal circulation features: • A grid or modified grid-based primary street system. Cul-de-sacs are discouraged, but may be approved in situations where difficult site planning issues, such as odd lot size, topography, or physical constraints exist or where their use results in a more efficient use of land, however in all cases the overall grid pattern of streets should be maintained. • Traffic-calming measures, where appropriate. • Roundabouts as alternative intersection controls, where appropriate. • Bicycle and pedestrian connections to adjacent streets, trails, public spaces, and bicycle paths. • Short block lengths consistent with City design standards.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 and CIRC-2, Policy CIRC-1.2 and Action CIRC-2.1, above. As detailed in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, the proposed project incorporates, as appropriate, the internal circulation features noted in Action CIRC-2.2.1, including traffic-calming measures (such as bulbed corners), bicycle and pedestrian connections to adjacent streets, bicycle routes, public spaces, and trails. Proposed streets would be constructed with relatively short block lengths in a grid pattern, connecting seamlessly to the adjacent existing grid pattern of Barber Yard.
Action CIRC-2.2.2 (Traffic Management): Perform routine, ongoing evaluation of the street traffic control system, with emphasis on traffic management, such as signal timing and coordination or the use of roundabouts, to optimize traffic flow along arterial corridors and reduce vehicle emissions.	**Consistent:** The proposed project would include traffic-calming features (such as corner bulbing) to help ensure effective management and optimize flow of traffic within the BYSP Area and surrounding area, thereby reducing vehicle emissions. See Section 3.16, Transportation, as well as the non-CEQA Operational Analysis (Appendix J) for further discussion.

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Goal CIRC-3: Expand and maintain a comprehensive, safe, and integrated bicycle system throughout the City that encourages bicycling.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 and CIRC-2, Policy CIRC-1.2 and Action CIRC-2.1, above. As discussed more fully in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, the proposed project includes a thoughtfully designed multiuse circulation plan, including a comprehensive, safe and integrated bicycle system plan. The proposed project would help contribute to the achievement of the City's broad-based goal to implement a dedicated bike network that is planned by the City to connect Chico State, the BYSP Area and the existing Barber Neighborhood by installing new or upgraded facilities as well as providing additional funding to the City to support its implementation of broader circulation and multimodal connection plans. Major internal streets would have either protected bike lanes or separated bike/pedestrian paths. The comprehensive bike system would be comprised of a variety of bicycle facilities. This is consistent with the goal of expanding and maintaining a comprehensive, safe, and integrated bicycle system.
Policy CIRC-3.3 (New Development and Bikeway Connections): Ensure that new residential and nonresidential development projects provide connections to the nearest bikeways.	**Consistent:** See also Consistency Determinations for Goals CIRC-1, CIRC-2 and CIRC-3, above. As discussed more fully in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, the proposed project's multimodal circulation plan includes numerous bicycle/pedestrian path connections, as well as funding to the City to facilitate same, which are intended to support enhanced connectivity to the nearest bikeways, including, among other things, by providing access to the adjacent Barber Neighborhood.
Action CIRC-3.3.1 (Bikeway Requirements): Require pedestrian and bicycle connections to the Citywide bikeway system every 500 feet, where feasible, as part of project approval and as identified in the Bicycle Master Plan.	**Consistent:** See also Consistency Determinations for Goals CIRC-1, CIRC-2 and CIRC-3 as well as Policy CIRC-3.3, above. As discussed in Section 3.16, Transportation, the proposed project would be constructed in accordance with all applicable laws and regulations, including those set forth within the Bicycle Master Plan, including connection frequency.
Policy CIRC-3.4 (Bicycle Safety): Improve safety conditions, efficiency, and comfort for bicyclists through traffic engineering, maintenance and law enforcement.	**Consistent:** See also Consistency Determinations for Goals CIRC-1, CIRC-2 and CIRC-3 as well as Policy CIRC-3.3, above. As discussed more fully in the Specific Plan, the proposed project includes a comprehensive network of on-site bicycle facilities that would encourage substantial travel by bicycle within the BYSP Area for recreation as well as provide bicycle access to all land uses within the BYSP Area. These improvements would include connections to existing bicycle facilities on Ivy Street and 16th Street. In addition, the proposed project would provide funding to

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	the City to support its installation of facilities for bicycle use in the project vicinity, including funding that could be used to ameliorate existing street network deficiencies.
Action CIRC-3.4.2 (Signage, Markings, and Lighting): Continue to provide signage and markings to warn vehicular traffic of the existence of merging or crossing bicycle traffic where bikeways make transitions into or across roadways. Delineate and sign bikeways in accordance with Caltrans' standards and install, where feasible, lighting for safety and comfort	**Consistent:** As discussed in Section 3.16, Transportation, the proposed project would be constructed in accordance with all applicable laws and regulations, including those within the Bicycle Master Plan, such as requirements to provide adequate signage and delineation of bikeways with the surrounding road network.
Action CIRC-3.4.4 (Bicycle Detection at Traffic Signals): Continue to install bicycle detectors at high volume bicycle/automobile intersections that have actuated signals.	**Consistent:** The proposed project would include a variety of bike paths, and as such would include all equipment and detection devices as required by the General Plan, BYSP, and Bicycle Master Plan.
Policy CIRC-3.6 (Bicycle Parking): Provide safe and secure bicycle parking and support facilities.	**Consistent:** As detailed in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, the proposed project would be required to provide adequate on-street and off-street bike parking facilities throughout the BYSP Area in accordance with applicable requirements and standards.
Goal CIRC-4: Design a safe, convenient, and integrated pedestrian system that promotes walking.	**Consistent:** See also Consistency Determinations for Goals CIRC-1, CIRC-2 and CIRC-3 as well as Policy CIRC-3.3, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project incorporates a thoughtfully designed pedestrian infrastructure plan to encourage walking. The proposed project would utilize multiuse paths, sidewalks, and paseos as a network of primary pedestrian paths throughout the BYSP Area, as well as providing funding to the City that could be used, among other things, to ameliorate existing deficiencies within nearby pedestrian facilities (e.g., failing pavement). These attributes are consistent with the goal of designing a safe, convenient, and integrated pedestrian system.
Policy CIRC-4.1 (Pedestrian Master Planning): Continue to integrate and highlight pedestrian access and dual use bicycle and pedestrian pathways in the Bicycle Master Plan.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-4, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project includes a comprehensive network of on-site multiuse facilities that would encourage substantial travel by bicycle and walking within the BYSP Area for recreation as well as provide bicycle and pedestrian access to all land uses within the BYSP Area. These improvements would include

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	connections to existing bicycle/pedestrian facilities on Ivy Street and 16th Street, consistent with the Chico Bicycle Plan 2019 Update.
Policy CIRC-4.2 (Continuous Network): Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-4 and Policy CIRC-4.1, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project includes a thoughtfully designed pedestrian infrastructure plan. The proposed project would utilize multiuse paths, sidewalks, and paseos as a network of primary pedestrian paths throughout the BYSP Area. This is consistent with providing a pedestrian network that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.
Policy CIRC-4.3 (Pedestrian-Friendly Streets): Ensure that streets in areas with high levels of pedestrian activity, such as near schools, employment centers, residential areas, and mixed-use areas, support safe pedestrian travel by providing elements such as detached sidewalks, bulb-outs, on-street parking, enhanced pedestrian crossings, and medians.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-4 and Policies CIRC-4.1 and 4.2, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project includes a thoughtfully designed pedestrian system plan. The proposed project would utilize multiuse paths, sidewalks, and paseos as a network of primary pedestrian paths throughout the BYSP Area. Multiuse paths and sidewalks would be physically separated from vehicular travel lanes and would be sufficiently wide to accommodate the width of two to three individuals at once.
Action CIRC-4.3.1 (Safe Pedestrian Crossings): As funding allows, improve pedestrian safety at intersections and other crossing locations by providing safe, well-marked pedestrian crossings, bulb-outs, on-street parking, audible warnings, or median refuges that reduce crossing widths.	**Consistent:** As described more fully in the Specific Plan, it is anticipated that on-site, major streets, designated in the BYSP, would have bicycle lanes and/or separated bicycle/pedestrian paths that separate bicyclists and pedestrians from adjacent vehicle traffic, improving safety. In addition, multiuse paths, sidewalks, and paseos would be utilized as primary pedestrian paths throughout the BYSP Area to further improve pedestrian safety in the BYSP Area. See Section 3.16, Transportation, as well as the non-CEQA operational analysis (Appendix J) for further discussion.
Action CIRC-4.3.2 (Expand Sidewalk Infrastructure): As funding allows, continue installation of sidewalk and pedestrian-related infrastructure in areas not currently served.	**Consistent:** See also Consistency Determination for Action 4.3.1, above. The proposed project would include sidewalks, multiuse paths, and paseos, as well as Bike Paths and Bike Routes throughout the BYSP Area. In addition, the proposed project would provide funding to the City as a fair share contribution to support the City's further efforts to enhance sidewalk and pedestrian-related infrastructure in the project vicinity.

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Goal CIRC-5: Support a comprehensive and integrated transit system as an essential component of a multimodal circulation system.	**Consistent:** Although the proposed project would be located on an infill site in an urbanized area that is near downtown, Chico State University, and existing transit infrastructure, there is no existing transit route or stops within the BYSP Area, as the BYSP Area in its current state is predominantly vacant. The BYSP proposes bus stops on Ivy Street near the health/fitness center, near the commercial spaces at Ivy Street and 16th Street, and on the edge of the BYSP Area on 16th Street, with final designs and locations to be determined in coordination with Butte County Association of Governments (BCAG) at the time of improvement. See Section 3.16, Transportation, for further discussion.
Policy CIRC-5.3 (Transit Connectivity in Projects): Ensure that new development supports public transit.	**Consistent:** Although the proposed project would be located on an infill site in an urbanized area that is near downtown, Chico State University, and existing transit infrastructure, there is no existing transit route or stops within the BYSP Area, as the BYSP Area in its current state is predominantly vacant. The BYSP proposes bus stops on Ivy Street near the health/fitness center, near the commercial spaces at Ivy Street and 16th Street, and on the edge of the BYSP Area on 16th Street, with final designs and locations to be determined in coordination with BCAG at the time of improvement. See Section 3.16, Transportation, for further discussion.
Action CIRC-5.3.1 (Roadway Transit Facilities): When planning or retrofitting roadways, consult with BCAG regarding the inclusion of transit stops, shelters, bus turnouts, and other transit improvements.	**Consistent:** See also Consistency Determination for Policy CIRC-5.3, above. The BYSP proposes bus stops on Ivy Street near the health/fitness center, near the commercial spaces at Ivy Street and West 16th Street, and on the edge of the BYSP Area on West 16th Street, with final designs and locations to be determined in coordination with BCAG at the time of improvement.
Action CIRC-5.3.2 (Roadway Improvements for New Development): During project review, consult with BCAG to determine appropriate requirements for the installation of stops and streetscape improvements, if needed to accommodate transit.	**Consistent:** See also Consistency Determination for Action 4.3.1, above. The proposed bus stops on Ivy Street near the health/fitness center, near the commercial spaces at Ivy Street and West 16th Street, and on the edge of the BYSP Area on West 16th Street, with final designs and locations to be determined in coordination with BCAG at the time of project review.
Goal CIRC-8: Provide parking that supports the citywide goals for economic development, livable neighborhoods, sustainability, and public safety.	**Consistent:** As described more fully in the Specific Plan and Chapter 2, Project Description, of this Draft EIR, parking for project residents, employees and visitors would be accommodated within the subject lot or per unit pursuant to applicable City standards and requirements for specific land uses. Similarly, users of the various open space and recreational amenities within the BYSP Area would

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	be accommodated with on-street and off-street parking areas as well, with all such uses accommodating the necessary parking pursuant to applicable City standards. In so doing, the proposed parking would support citywide goals for economic development, livable neighborhoods, sustainability and public safety.
Policy CIRC-8.1 (Appropriate Parking): Ensure that parking is provided in appropriate locations and amounts	**Consistent:** See also Consistency Determination for Goal CIRC-8, above. Parking for project residents, employees, and visitors would be accommodated within each subject lot or provided to serve each unit in accordance with the applicable Parking Regulations for parking requirements for specific land uses. Similarly, users of the various open space and recreational amenities within the BYSP Area would be accommodated with on-street and off-street parking areas pursuant to applicable City standards.
Goal CIRC-9: Reduce the use of single occupant motor vehicles.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-5, above. The proposed project, which would be developed on an urban, infill site near downtown Chico and existing transit corridors, would provide a multimodal circulation network, encouraging alternative modes of transportation including use of bicycles, walking and public transit. These characteristics are consistent with the goal of reducing the use of single occupant motor vehicles.
Policy CIRC-9.1 (Reduce Peak-Hour Trips): Strive to reduce single occupant vehicle trips through the use of travel demand management strategies.	**Consistent:** See also Consistency Determination for Goal CIRC-9, above. The proposed project, which would be developed on an urban, infill site near downtown Chico and existing transit corridors, would incorporate several transportation demand management strategies and provide a multimodal circulation plan. Among other things, it would provide for bicycle and pedestrian modes of transportation and encourage “walkability over drive-ability" to reduce single-occupancy vehicle (SOV) trips. Furthermore, the proposed project would result in resident and employee VMT below BCAG thresholds due to the proposed project’s location, land use diversity, and Medium-High Density Residential Housing See Section 3.16, Transportation, for further discussion.
Action CIRC-9.1.3 (New Employer Trip Reduction Programs): As a condition of project approval, require new nonresidential projects that will employ more than 100 people to submit a Travel Demand Management	**Consistent:** See also Consistency Determinations for Goal CIRC-9 and Action CIRC-9.1.2, above.

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Plan that identifies strategies, such as those listed in Action CIRC-9.1.2, to reduce single-occupancy vehicle trips.	The proposed project would allow for future employment generating land uses and would be required to comply with applicable Travel Demand Management Plan requirements. See Section 3.16, Transportation, for further discussion.
Policy CIRC-9.3 (Emphasize Trip Reduction): Emphasize automotive trip reduction in the design, review, and approval of public and private development.	**Consistent:** See also Consistency Determinations for Goal CIRC-9 and Action CIRC-9.1.2, above. As discussed more fully in the Specific Plan, the proposed project has been comprehensively and thoughtfully designed to emphasize auto trip reduction, including, among other things, providing a multimodal circulation plan that would be accessible to bicycles and pedestrians and includes conceptual plans for public transit connections in the future. The proposed project also encourages “walkability over drive-ability" to reduce SOV trips, consistent with the policy of emphasizing automotive trip reduction. See Section 3.16, Transportation, for further discussion.
Community Design	
Goal CD-1: Strengthen Chico’s image and sense of place by reinforcing the desired form and character of the community.	**Consistent:** See also Consistency Determinations for Goals SUS-1, SUS-4 and LU-1, above. As described more fully in Chapter 2, Project Description, of this Draft EIR and the Specific Plan, the proposed project, which would facilitate achievement of the vision set forth in the General Plan for SPA-2 for significant new growth, would be required to follow the applicable City development and design standards, and guidelines. As such, the proposed project would be consistent with this goal as well as the SPA-2 land use designation more generally, including, among other things, being compatible with existing development to the north and east of the BYSP Area, therefore further reinforcing the desired form and character of the community.
Policy CD-1.1 (Natural Features and Cultural Resources): Reinforce the City’s positive and distinctive image by recognizing and enhancing the natural features of the City and protecting cultural and historic resources.	**Consistent:** Nonresidential and multi-family elements within the proposed project would be subject to the City’s site design and architectural review process. The proposed project would provide opportunities for the potential adaptive reuse of existing building(s) (including those determined to be historic) within the BYSP Area and would also be required to mitigate any significant impacts that could occur as a result of previously undiscovered cultural resources found during construction. See Section 3.5, Cultural and Tribal Cultural Resources, for further discussion.
Action CD-1.1.1 (Highlight Features and Resources): Incorporate and highlight natural features such as	**Consistent:** See also Consistency Determination for Policy CD-1.1, above.

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scenic vistas, creeks, and trees, as well as cultural resources such as rock walls, into project design.	As described more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the nonresidential and multi-family residential elements of the proposed project would be subject to site design and architectural review and would be required to be developed in accordance with the approved landscape palette and other applicable development standards and design guidelines. Retention of existing trees will be evaluated as specific development applications are processed and the feasibility of incorporating such trees into the project design can be evaluated.
Action CD-1.1.2 (Landscape Improvement): Emphasize landscaping as a fundamental design component, retaining mature landscaping when appropriate, to reinforce a sense of the natural environment and to maintain an established appearance.	**Consistent:** See also Consistency Determinations for Policy CD-1.1 and Action CD-1.1.2, above. As discussed in more detail in the Specific Plan, the proposed project would incorporate numerous open space features and would be required to implement its approved landscaping plan in accordance with the BYSP's landscape palette and relevant City review requirements. The foregoing would help to reinforce a sense of the natural environment and to maintain an established appearance, to the extent feasible based on existing conditions.
Goal CD-2: Enhance edges and corridors that represent physical boundaries, transitions and connections throughout the community.	**Consistent:** As discussed more fully in the Specific Plan and the Project Description of the Draft EIR, the proposed would extend Ivy Street and West 16th Street to serve as primary access points to recreational areas of the proposed project. The BYSP Area would be enhanced with special landscape features along the 16th Street Gateway, the Ivy Street Gateway, along the northern, western and southern edges of the BYSP Area, and along Estes Road and the UPRR line edge. In so doing, the proposed project would enhance edges and corridors that represent physical boundaries, transitions and connections throughout the community.
Policy CD-2.1 (Walkable Grid and Creek Access): Reinforce a walkable grid street layout and provide linkages to creeks and other open spaces.	**Consistent:** As discussed more fully in the Specific Plan and Chapter 2, Project Description of the Draft EIR, the proposed project would provide for numerous park, open space, and recreational amenities as well as a walkable grid street, including pedestrian network consisting of multiuse paths, sidewalks and paseos to provide linkages within the BYSP Area and to the surrounding areas and other open spaces.
Policy CD-2.3 (Corridor Improvements): Improve corridors traversing the City to enhance their aesthetics and accessibility.	**Consistent:** See also Consistency Determination for Policy CD-2.1, above. As discussed more fully in the Specific Plan and Chapter 2, Project Description of the Draft EIR, the proposed project would incorporate a thoughtfully designed multimodal circulation plan, including buffer landscaping and street trees into the site plans,

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	which would improve corridors within the City and enhance their aesthetics and accessibility.
Goal CD-3: Ensure project design that reinforces a sense of place with context sensitive elements and a human scale.	**Consistent:** See also Consistency Determinations for Goals LU-1 and CD-1, above. As detailed more fully in the Specific Plan, the proposed project would incorporate and celebrate the history of the BYSP Area, and buildings are envisioned to have contextual architectural features that link to the surrounding Barber Neighborhood's character. Landscaping, lighting, and site furnishings would further contribute to a cohesive aesthetic.
Policy CD-3.1 (Lasting Design and Materials): Promote architectural design that exhibits timeless character and is constructed with high quality materials.	**Consistent:** See also Consistency Determination for Goal CD-3, above. As detailed more fully in the Specific Plan, the proposed project would incorporate and celebrate the history of the BYSP Area, and buildings are envisioned to have contextual architectural features that link to the surrounding Barber Neighborhood's character. Architectural styles are intended to extend the Barber Neighborhood, (including Craftsman, Farmhouse Victorian, Spanish Revival, etc.), and would be varied in terms of lot type, building type, floor plans, materials and colors. These Specific Plan requirements are anticipated to result in a cohesive neighborhood constructed with high quality materials that blend into the surrounding area.
Policy CD-3.2 (Bicycles and Pedestrians): Maintain and enhance the pedestrian- and bicycle-friendly environment of Chico.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-4 as well as Policy CIRC-3.3, above. As detailed more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project includes a thoughtfully designed multimodal circulation plan. Among other things, the proposed project would utilize multiuse paths, sidewalks, and paseos as a network of primary pedestrian paths throughout the BYSP Area and would also provide funding to the City to be used to further enhance bicycle and pedestrian facilities in the project vicinity. These characteristics are consistent with maintaining and enhancing the pedestrian- and bicycle-friendly environment of Chico.
Action CD-3.2.1 (Pedestrian-Scale Site Planning): Utilize design techniques provided in the City's Design Guidelines Manual that support pedestrian- and bicycle-friendly site planning.	**Consistent:** See also Consistency Determination for Policy CD-3.2, above. The proposed project has been thoughtfully designed and would be required to be constructed in accordance with applicable provisions of the Bicycle Master Plan and City's Design Guidelines Manual, and would include access to greater transit, bicycle, and pedestrian resources for greater connectivity and safety throughout the BYSP Area and vicinity.

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Policy CD-3.2 (Bicycles and Pedestrians): Maintain and enhance the pedestrian- and bicycle-friendly environment of Chico.	**Consistent:** See also Consistency Determinations for Goals CIRC-1 through CIRC-4 as well as Policy CIRC-3.3, above. As detailed more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project includes a thoughtfully designed multimodal circulation plan. Among other things, the proposed project would utilize multiuse paths, sidewalks, and paseos as a network of primary pedestrian paths throughout the BYSP Area and would also provide funding to the City to be used to further enhance bicycle and pedestrian facilities in the project vicinity. These characteristics are consistent with maintaining and enhancing the pedestrian- and bicycle-friendly environment of Chico.
Action CD-3.2.1 (Pedestrian-Scale Site Planning): Utilize design techniques provided in the City's Design Guidelines Manual that support pedestrian- and bicycle-friendly site planning.	**Consistent:** See also Consistency Determination for Policy CD-3.2, above. The proposed project has been thoughtfully designed and would be required to be constructed in accordance with applicable provisions of the Bicycle Master Plan and City's Design Guidelines Manual, and would include access to greater transit, bicycle, and pedestrian resources for greater connectivity and safety throughout the BYSP Area and vicinity.
Policy CD-3.3 (Pedestrian Environment and Amenities) Locate parking areas and design public spaces within commercial and mixed-use projects in a manner that promotes pedestrian activity.	**Consistent:** See also Consistency Determination for Goal CIRC-8, above. As described more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, parking for residents, employees and visitors would be accommodated within subject lots or provided to serve each unit pursuant to applicable City parking requirements for specific land uses. Similarly, users of the various recreational and open space amenities within the BYSP Area would be accommodated with on-street and off-street parking areas pursuant to applicable standards.
Policy CD-3.4 (Public Safety) Include public safety considerations in community design.	**Consistent:** As described more fully in the Specific Plan, the proposed project includes widely accepted crime deterrence/prevention measures such as, among other things, well-lit streets and pathways and appropriate landscaping.
Goal CD-4: Maintain and enhance the character of Chico's diverse neighborhoods.	**Consistent:** As described more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would be constructed and operated in accordance with the applicable City design standards and guidelines; and would reflect a diverse design style intended to create a cohesive neighborhood character that acts as an extension of the adjacent Barber Neighborhood.

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Action CD-4.1.1 (Neighborhood Design Details): Develop and implement neighborhood plans that identify design qualities and elements for specific areas.	**Consistent:** See also Consistency Determination for Goals CD-4, SUS-1 and LU-2 and Policy LU-1.2, above. As described more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project's design would be consistent with the surrounding neighborhood as well as the Southwest Chico Neighborhood Improvement Plan, as the project would create multimodal transportation connections to the Barber Neighborhood, provide common open space amenities, and would facilitate regional bicycle connections to the surrounding area.
Goal CD-5: Support infill and redevelopment compatible with the surrounding neighborhood.	**Consistent:** See also Consistency Determination for Goals CD-4, SUS-1 and LU-2 and Policy LU-1.2, above. As discussed in more detail in the Specific Plan, the BYSP Area is an urban, infill site adjacent to the existing Barber Neighborhood. The proposed project would provide for a range of housing types as well as commercial, recreational and open space uses. Buildings are envisioned to have contextual architectural features that link to the surrounding Barber Neighborhood's character.
Policy CD-5.1 (Compatible Infill Development): Ensure that new development and redevelopment reinforces the desirable elements of its neighborhood including architectural scale, style, and setback patterns.	**Consistent:** See also Consistency Determination for Goal CD-5, above. As discussed in more detail in the Specific Plan, the proposed project would incorporate and celebrate the history of the BYSP Area and vicinity, and buildings are envisioned to have contextual architectural features that link to the surrounding Barber Neighborhood's character. Proposed design elements including architectural scale, style, and setback patterns, would be subject to review and approval by the City of Chico in accordance with applicable requirements and standards to ensure consistency therewith .
Economic Development	
Goal ED-3: Maintain a redevelopment strategy that encourages revitalization of existing neighborhoods, along with successful commercial and employment centers.	**Consistent:** See also Consistency Determination for Goals CD-4, SUS-1 and LU-2 and Policy LU-1.2, above. The proposed project, which would be located on an urban, infill site near downtown and Chico State University, would be developed on an under-utilized site in accordance with a comprehensive Specific Plan that would provide for a thoughtful mix of uses including a range of housing types as well as commercial, recreational and open space uses. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, there is the opportunity to adaptively reuse certain existing structures, with up to approximately 150,000 square feet of future commercial and recreational uses. In addition, the proposed project involves an additional 60,000 square feet of new commercial uses. As such, the

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	proposed project would help to foster a redevelopment strategy that encourages revitalization of existing neighborhoods, along with providing opportunities for successful commercial and employment centers within the BYSP Area.
Housing Element (2014)	
Goal H.1: Increase equal housing opportunities.	**Consistent:** See also Consistency Determination for Goals ED-3, SUS-1 and LU-2 and Policy LU-1.2, above. As discussed in more detail in the Specific Plan, the proposed project would include a variety of housing types (both single- and multi-family in a range of densities) which will help the City meet the demand for new residential units for all economic segments of the Chico community.
Policy H.1.1: Encourage and support the enforcement of housing laws and regulations prohibiting discrimination.	**Consistent:** See also Consistency Determination for Goal H-1, above. The proposed project would include a variety of housing types (both single- and multi-family in a range of densities), and would be required to be constructed and operated in accordance with all federal, State, and local anti-discrimination housing laws and regulations.
Policy H.1.2: Remove regulatory constraints to equal housing opportunity.	**Consistent:** See also Consistency Determination for Goal H-1, above. As discussed in more detail in the Specific Plan, the proposed project would include a variety of housing types, including single- and multi-family units with a range of densities to help the City accommodate its need to serve all economic segments of the Chico community. The proposed project would be required to comply with all federal, State, and local anti-discrimination housing laws and regulations to facilitate equal opportunity housing.
Goal H.2: Provide housing that is affordable to low incomes.	**Consistent:** See also Consistency Determination for Goal H-1, above. As discussed in more detail in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would include a variety of housing types, including both single- and multi-family units with a range of densities help the City accommodate its need to serve all economic segments of the Chico community.
Policy H.2.1: Leverage federal and State programs to produce and preserve affordable housing.	**Consistent:** See also Consistency Determination for Goal H-2, above. The proposed project would include a variety of housing types, including both single- and multi-family units with a range of densities help the City accommodate its need to serve all economic segments of the Chico community

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Policy H.2.4: Develop mechanisms that harness local resources to meet local housing needs.	**Consistent:** See also Consistency Determinations for Goals H-1 and H-2, above. As detailed in the Specific Plan, the proposed project incorporates sufficient flexibility with respect to site planning in terms of housing type and density range, which provides opportunities to help provide housing to serve a range of economic segments in the Chico community.
Goal H.3: Promote construction of a wide range of housing types.	**Consistent:** See also Consistency Determinations for Goals H.1 and H.2 and Policy H.2.4, above. As described more fully in the Specific Plan, the proposed project would include a wide variety of housing types, including both single- and multi-family units with a range of densities.
Policy H.3.2: Enable sufficient housing construction to meet future needs.	**Consistent:** See also Consistency Determinations for Goals H.1 through H.3, above. As described more fully in the Specific Plan, the proposed project would include a variety of housing types up to 1,250 units. The proposed project would help the City meet its demand for new residential units to serve a range of economic segments in the Chico community, as set forth by the Regional Housing Needs Allocation Process.
Policy H-3.3: Promote a mix of dwelling types and sizes throughout the City.	**Consistent:** The proposed project would provide opportunities for the development of a mix of dwelling types and sizes, including Residential Mixed Use (RMU), Medium Density Residential (MDR), and Medium-High Density Residential (MHDR) land uses, encouraging a mix of densities and housing types.
Policy H.3.4: Maintain an adequate supply of rental housing to meet the needs of all renters, including university students and employees.	**Consistent:** See also Consistency Determination for Policy H-3.3, above. The proposed project would include up to 1,250 dwelling units, including MDR and MHDR housing, which would be used as rental housing during project operation.
Policy H.3.5: Maintain and enhance housing and public facilities in residential areas.	**Consistent:** See also Consistency Determinations for Goals SUS-1, LU-1, LU-2, H-1 and H-2, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would implement a thoughtfully designed mix of residential, commercial, recreational and open space uses, as well as several public amenities to serve the new development and the surrounding areas.

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Goal H.4: Encourage the creation of housing for persons with special needs.	**Consistent:** See also Consistency Determinations for Goals H.1 and H.2, above. The proposed project incorporates ample flexibility in providing a range of residential opportunities and would include up to 1,250 dwelling units with a range of housing types and densities, some of which may be used for persons with special needs.
Policy H.4.1: Make housing accessible to persons with disabilities.	**Consistent:** See also Consistency Determination for Goal H.4, above. The proposed project incorporates flexibility in providing a range of residential opportunities and would be constructed and operated in accordance with all applicable federal, State, and local accessibility laws and regulations.
Policy H.4.3: Assist in the provision of housing for persons with disabilities.	**Consistent:** See also Consistency Determination for Policy H.4.1, above. The proposed project incorporates ample flexibility in providing a range of residential opportunities, and would be constructed with all applicable federal, State, and local accessibility laws and regulations, including with the provision of housing for persons with disabilities.
Policy H.5.1: Maintain and enhance the character and affordable nature of Chico's older neighborhoods.	**Consistent:** See also Consistency Determinations for Goals H.1 and H.2, above. As detailed in the Specific Plan, the proposed project has been thoughtfully and comprehensively designed to help maintain and enhance the character of the existing neighborhood surrounding the BYSP Area and incorporates a range of housing types and densities to help the City in meeting its housing production goals to serve all economic segments.
Goal H.7: Encourage energy efficiency in housing.	**Consistent:** See also Consistency Determinations for Goals SUS-1 through SUS-4, above. As detailed in Chapter 2, Project Description, of the Draft EIR, housing included within the proposed project would be required include numerous energy-efficient features in accordance with applicable laws and regulations. See Section 3.6, Energy, for additional details.
Policy H.7.1: Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code and reduce long-term housing costs through planning and applying energy conservation measures.	**Consistent:** See also Consistency Determination for Goal H-7, above. Housing included within the proposed project would be required to include numerous energy-efficient features, and would be required to adhere to all federal, State, and local Energy Building laws and regulations (including those set forth in applicable building codes). See Section 3.6, Energy, for additional details.

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Housing Element (2022)	
HE Action 1.8.3: As part of the Barber Yard Specific Plan, enhance recreational opportunities in the Southwest Chico neighborhood (Census Tract 12) by adding a variety of parks and recreation facilities. This may include, but is not limited to, a historic ballpark, dog park, pocket parks, and event and picnic table areas along with an indoor athletics facility. Approximately 4.5 acres of new public parks would be open to the general public as well as residents that live in the Barber/Southwest Chico neighborhood (Census Tract 12). The remaining parks and the athletics facility, approximately 10 acres, may require a fee or membership.	**Consistent:** The proposed project would include a broad range of parks that would enhance recreational opportunities in the Southwest Chico neighborhood. These include Dog Park, Picnic Grove, Ruins Park, and The Yard (three pocket parks) for a total of approximately 4.7 acres of public parks, as well as The Diamond at Barber Yard, The Engineering Building, Diamond Plaza, The Square, The Shop, and the Athletics Facility for a total of approximately 11 acres of private recreational amenities. Refer to Section 3.15, Recreation, for further discussion.
Parks, Public Facilities, and Service	
Goal PPFS-1: Continue cooperative efforts with the Chico Area Recreation and Park District and the Chico Unified School District to provide a broad range of high quality parks and recreation facilities and services for all residents.	**Consistent:** See also Consistency Determinations for Goals LU-1 and LU-2, and HE Action 1.8.3, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR. The proposed project would include a wide range of park, recreational and open space uses including approximately 4.7 acres of public parks that would be designed and developed in cooperation with Chico Area Recreation and Park District (CARD) and, if appropriate, Chico Unified School District (CUSD). These facilities, among other private open space elements, would serve the project residents, employees and visitors as well as the broader Chico community.
Goal PPFS-2: Utilize creeks, greenways and preserves as a framework for a system of open space.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and PPFS-1, above. As discussed in the Specific Plan, there are no creeks, greenways or preserves within the project site to utilize to enhance the City's open space framework. See Section 3.15, Recreation, for further discussion.
Goal PPFS-3: Support efforts by Chico Unified School District, CSU Chico, Butte College and private educational institutions to maintain and improve educational facilities and services in the City.	**Consistent:** Specific development proposals within the project would pay the applicable CUSD School Impact Fees pursuant to Government Code Section 65995 and Education Code Section 17620 to help support

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	the provision adequate school facilities for students generated as a result of new development. See Section 3.14, Public Services, for further discussion.
Action PPFS-3.1.2 (Plan for School Sites): Consult with Chico Unified School District staff when planning the Special Planning Areas to ensure that school facilities are in place to meet the needs of development.	**Consistent:** See also Consistency Determination for Goal PPFS-3, above. The proposed project would all applicable CUSD School Impact Fees in accordance with applicable laws and regulations. See Section 3.14, Public Services, for further discussion.
Goal PPFS-4: Maintain a sanitary sewer system that meets the City's existing and future needs, complies with all applicable regulations, and protects the underlying aquifer	**Consistent:** As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would ensure the provision of adequate services to its residents, employees and visitors. It would be developed on an urban, infill site near existing sanitary sewer infrastructure. Among other things, an existing 33-inch sanitary sewer main at the southern edge of the BYSP Area would be extended to serve the proposed project. Existing treatment and conveyance systems have adequate capacity to serve the proposed project. See Section 3.17, Utility and Service Systems, for further discussion.
Policy PPFS-4.1 (Sanitary Sewer System): Improve and expand the sanitary sewer system as necessary to accommodate the needs of existing and future development.	**Consistent:** See also Consistency Determination for Goal PPFS-4, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would ensure the provision of adequate services to its residents, employees and visitors. It would be developed on an urban, infill site near existing sanitary sewer infrastructure. Wastewater infrastructure in the vicinity of the project site would be extended to serve the proposed project in accordance with the City's obligation to ensure the needs of existing and future development are met. Existing treatment and conveyance systems have adequate capacity to serve the proposed project. See Section 3.17, Utility and Service Systems, for further discussion.
Policy PPFS-4.2 (Protection of Groundwater Resources): Protect the quality and quantity of groundwater resources, including those that serve existing private wells, from contamination by septic systems.	**Consistent:** As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would ensure the provision of adequate water supplies to serve its residents, employees and visitors while maintaining and protecting water quality and quantity. The proposed project would be served by the City's municipal sewer and Cal Water's domestic drinking water well systems; no septic systems would be used.

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	See Section 3.17, Utility and Service Systems and Section 3.10, Hydrology and Water Quality, for further discussion.
Policy PPFS-4.4 (Wastewater Flows): Ensure that total flows are effectively managed within the overall capacity of the Water Pollution Control Plant.	**Consistent:** See also Consistency Determinations for Goal PPFS-4 and Policy PPFS-4.2, above. The Water Pollution Control Plant would have adequate capacity to serve the net increase in wastewater generated by the proposed project. Existing treatment and conveyance systems have adequate capacity to serve the proposed project. Refer to Section 3.17, Utilities and Service Systems for further discussion.
Goal PPFS-5: Maintain a sustainable supply of high quality water, delivered through an efficient water system to support Chico's existing and future population, including fire suppression efforts.	**Consistent:** As detailed in the adopted Water Supply Assessment (Appendix K), Cal Water would have adequate potable water supplies to serve the net increase in water demand associated with the proposed project, as well as other planned growth in the Chico District. Refer to Section 3.17, Utility and Service Systems and Section 3.10, Hydrology and Water Quality, for further discussion.
Policy PPFS-5.2 (Future Water System): Consult with Cal Water to ensure that its water system will serve the City's long-term needs and that State regulations SB 610 and SB 221 are met.	**Consistent:** See also Consistency Determination for Goal PPFS-5, above. A Water Supply Assessment/verification was prepared for the proposed project in coordination with Cal Water pursuant to SB 610 and SB 221. Refer to Section 3.17, Utilities and Service Systems, as well as Appendix K, for further discussion.
Action PPFS-5.3.2 (Water Reuse): Encourage new development to install water conserving irrigation systems such as grey water systems.	**Consistent:** See also Consistency Determination for Goal PPFS-5, above. The proposed project would be required to implement applicable requirements set forth in the Cal Green Code, including features such as low-flow plumbing, smart irrigation systems, and drought-tolerant landscaping. Refer to Section 3.17, Utilities and Service Systems, as well as Appendix K, for further discussion
Goal PPFS-6: Provide a comprehensive and functional stormwater management system that protects people, property, water quality, and natural aquifers.	**Consistent:** See also Consistency Determination for Goal PPFS-5, above. As discussed more fully in the Specific Plan, the proposed project would install new storm drainage improvements that meter the release of runoff during peak storm events and incorporate pollution prevention measures. The proposed project includes an off-site stormwater detention pond and related facilities located directly south of the BYSP Area. These characteristics are consistent with the goal of providing a comprehensive and functional stormwater management system that protects people, property, water quality, and natural aquifers.

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	Refer to Section 3.17, Utilities and Service Systems for further discussion.
Policy PPFS-6.2 (Storm Water Drainage): Continue to implement a stormwater drainage system that results in no net increase in runoff	**Consistent:** See also Consistency Determination for Goal PPFS-6, above. As detailed in the Specific Plan, At full buildout, the proposed project would closely match the historical hydrology of Barber Yard and take advantage of the infiltration capacity of the site soils. The proposed project would implement a stormwater drainage system that results in no net increase in runoff in accordance with all applicable MS4 and other requirements and standards. Refer to Section 3.17, Utilities and Service Systems and Section 3.10, Hydrology and Water Quality, for further discussion.
Policy PPFS-6.3 (Storm Water Drainage BMPs): To protect and improve water quality, require the use of Best Management Practices for stormwater drainage infrastructure suited to the location and development circumstances.	**Consistent:** See also Consistency Determinations for Goal PPFS-6 and Policy PPFS-6.2, above. As discussed in more detail in Chapter 2, Project Description, of the Draft EIR, the proposed project would install a new off-site water detention/retention basin and related facilities and employ Best Management Practices to retain and infiltrate or treat 2-year storms and detain with metered release the 10- and 100-year storms per to applicable City of Chico and other requirements, including National Pollutant Discharge Elimination System (NPDES) Permit (MS4) requirements. Refer to Section 3.17, Utilities and Service Systems and Section 3.10, Hydrology and Water Quality, for further discussion.
Policy PPFS-6.4 (Water Runoff): Protect the quality and quantity of water runoff that enters surface waters and recharges the aquifer.	**Consistent:** See also Consistency Determinations for Goal PPFS-6 and Policy PPFS-6.3, above. As discussed in more detail in Chapter 2, Project Description, of the Draft EIR, the proposed project would install a new off-site water quality retention/detention basin and related facilities to retain and infiltrate or treat 2-year storms and detain with metered release the 10- and 100-year storms per applicable City of Chico and other requirements, including NPDES Permit (MS4) requirements. Refer to Section 3.17, Utilities and Service Systems and Section 3.10, Hydrology and Water Quality, for further discussion.
Goal PPFS-8: Ensure that solid waste and recyclable collection services are available to City residents.	**Consistent:** Waste Management and Recology provide solid waste services for the City. The proposed project would be served by the waste hauling companies which currently provide services to the City. Refer to Section 3.14, Public Services for further discussion.

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Policy PPFS-8.1 (Waste Recycling): Provide solid waste collection services that meet or exceed State requirements for source reduction, diversion, and recycling.	**Consistent:** See also Consistency Determination for Goal PPFS-8, above. The City is currently served with commercial recycling and waste diversion services, and the proposed project would be served with these services as well and would be required to adhere to all applicable requirements to help support the City in its efforts to meet or exceed State requirements for source reduction, diversion and recycling. Refer to Section 3.14, Public Services for further discussion.
Action PPFS-8.1.1 (Green Waste): Encourage recycling, composting, and organic waste diversion within the City and continue providing green yard waste recycling services, seasonal leaf collection and street sweeping services.	**Consistent:** See also Consistency Determinations for Goal PPFS-8 and Policy PPFS-8.1, above. The City currently has several provisions that require or promote recycling and waste reduction. The proposed project would be required to be consistent with all federal, State, and local statutes and regulations related to solid waste. Refer to Section 3.14, Public Services for further discussion.
Open Space and Environment	
Goal OS-1: Protect and conserve native species and habitats.	**Consistent:** The proposed project does not require the removal of any native species or habitats. Refer to Section 3.4, Biological Resources for further discussion.
Policy OS-1.1 (Native Habitats and Species): Preserve native species and habitat through land use planning, cooperation, and collaboration.	**Consistent:** The proposed project would preserve native species and habitats, avoiding any sensitive biological areas within the southern boundary. Refer to Section 3.4, Biological Resources for further discussion.
Action OS-1.1.1 (Development/Preservation Balance): Direct development to appropriate locations consistent with the Land Use Diagram, and protect and preserve areas designated Open Space and areas that contain sensitive habitat and species.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-1, above. As discussed more fully in Chapter 2, Project Description, of the Draft EIR, the proposed project, which would be developed on an urban, infill site, incorporates a mix of uses that is consistent with the Land Use Diagram, which designates the BYSP Area as Special Planning Area (SPA), specifically SPA-2-Barber Yard. The proposed project would include expansive areas of open space and recreational amenities throughout the BYSP Area.
Action OS-1.1.3 (Sustainable Community Strategy): In support of AB 32, work with the Butte County Association of Governments to implement the Sustainable Community Strategy (SB 375), which directs smart-	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and SUS-1 through 4, above. As described in more detail in the Specific Plan, the proposed project would be developed on an urban, infill site, and would be

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growth development to urbanized areas.	designed, constructed and operated in a manner that is consistent with AB 32 and the 2020 RTP/SCS, as well as any other federal, State, and local laws, regulations and policies related to smart growth within urbanized areas. Refer to Section 3.6, Energy, and Section 3.8, Greenhouse Gas Emissions, for further discussion.
Action OS-1.1.5 (Control Invasive Species): Prioritize efforts to remove non-native species within Bidwell Park and other City greenways, and condition new development adjacent to Bidwell Park and greenways to protect native species and habitat from the introduction of invasive species.	**Consistent:** The proposed project would not introduce any invasive species within the project site to protect native species and habitat. Refer to Chapter 2, Project Description, and Section 3.4, Biological Resources for further discussion.
Policy OS-1.2 (Regulatory Compliance): Protect special-status plant and animal species, including their habitats, in compliance with all applicable State, federal and other laws and regulations.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, OS-1 and Policy OS-1.1.2, above. The proposed project, which would be developed on an urban, infill site, would be required to implement MM BIO-1 through MM BIO-8, which would provide for the protection of several special-status species and their related habitats. The proposed project would be designed, constructed and operated in compliance with all applicable federal, State, and other laws and regulations related to the protection of special-status plant and animal species. Refer to Chapter 2, Project Description, and Section 3.4, Biological Resources for further discussion.
Action OS-1.2.1 (State and Federal Guidelines): Ensure that project-related biological impacts are considered and mitigated, and require applicants to obtain all necessary local, State, and federal permits for projects that may affect special-status species or their habitat.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, OS-1 and Policy OS-1.2.1, above. As described in this Draft EIR, all project-related biological impacts are considered less than significant or less than significant with mitigation incorporated. See Section 3.4, Biological Resources, for further discussion.
Policy OS-1.3 (Light Pollution): Reduce excessive nighttime light and glare.	**Consistent:** As discussed in more detail in Chapter 2, Project Description, of the Draft EIR and the Specific Plan, the proposed project would be constructed and operated in accordance with all applicable Municipal Code and Specific Plan requirements and development standards to reduce impacts related to excessive nighttime light and glare. Refer to Chapter 2, Project Description, and Section 3.1, Aesthetic Resources for further discussion.

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Policy OS-2.5 (Creeks and Riparian Corridors): Preserve and enhance Chico's creeks and riparian corridors as open space for their aesthetic, drainage, habitat, flood control, and water quality values.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, OS-1 and Policy OS-1.2.1, above. As described more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would protect riparian habitat to the south of the BYSP Area in accordance with the appliable requirements set forth in applicable laws and regulations pursuant to the authority of the United States Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB), as outlined under MM BIO-8. See Section 3.4, Biological Resources, for further discussion.
Policy OS-2.6 (Oak Woodlands): Protect oak woodlands as open space for sensitive species and habitat.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-1, above. As discussed more fully in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project, which would be developed on an urban, infill site. The off-site improvement area contains trees including Valley Oak Riparian Woodland. No trees in this sensitive area would be removed as part of the proposed project, and the area would be restored following temporary construction for the storm drain outfall, consistent with the requirements of MM BIO-8. See Section 3.4, Biological Resources, for further discussion.
Goal OS-3: Conserve water resources and improve water quality.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. As discussed more fully in Chapter 2, Project Description, of the Draft EIR, the proposed project would be required to utilize water conservation measures in accordance with applicable requirements of the Cal Green Code, including residential and nonresidential low-flow plumbing fixtures, smart irrigation systems, and drought-tolerant landscaping. Refer to Section 3.6, Energy, and Section 3.10, Hydrology and Water Quality for further discussion.
Policy OS-3.1 (Surface Water Resources): Protect and improve the quality of surface water.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. The proposed project would be required to implement water pollution prevention measures to protect water quality during construction and operation. Refer to Section 3.10, Hydrology and Water Quality for further discussion.
Policy OS-3.2 (Protect Groundwater): Protect groundwater and aquifer recharge areas to maintain groundwater supply and quality.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above.

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	As detailed in Chapter 2, Project Description, of the Draft EIR, the proposed project's storm drainage system includes a stormwater retention basin and related facilities and other Low Impact Development (LID) features and infiltration approaches, such as permeable pavers, gravel alleys instead of concrete, minimizing street widths, separating sidewalks, and plating trees, which would promote infiltration of runoff into the soil and help protect groundwater and aquifer recharge areas. Refer to Section 3.10, Hydrology and Water Quality for further discussion.
Action OS-3.2: Monitor the status of known groundwater and soil contamination sites within the Planning Area as identified by the California Department of Toxic Substances Control and the Regional Water Quality Control Board.	**Consistent:** A Phase I and Phase II Environmental Site Assessment was prepared for the proposed project, which include monitoring reports of the groundwater quality of known wells on the project site and vicinity. The proposed project would be required to be developed in accordance with all laws and regulations addressing hazardous materials and water quality. Refer to Section 3.9, Hazards and Hazardous Materials, and Section 3.10, Hydrology and Water Quality, for further discussion.
Policy OS-3.3 (Water Conservation and Reclamation): Encourage water conservation and the reuse of water.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. The proposed project would be required to utilize water conservation measures in accordance with applicable requirements of the Cal Green Code, including residential and nonresidential low-flow plumbing fixtures, smart irrigation systems, and drought-tolerant landscaping. See Section 3.6, Energy, Section 3.10, Hydrology and Water Quality, and Section 3.17, Utility and Service Systems, for further discussion.
Action OS-3.3.1 (Water Conservation Program Funding): Work with the California Water Service Company to implement a water conservation program to reduce per capita water use 20 percent by 2020 pursuant to the requirements of the State Water Plan.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. As detailed in the Water Supply Assessment/Verification prepared for and adopted by Cal Water (see Appendix K), the proposed project would be required to implement water conservation measures in accordance with applicable requirements of the Cal Green Code. See Section 3.17, Utilities and Service Systems, for further discussion.
Action OS-3.3.2 (Reduce the Use of Turf): Limit the use of turf on landscape medians, parkways, and other common areas in favor of native and drought-tolerant ground cover, mulch, and other landscaping design elements, and support the conversion of existing turf to less water-intensive ground cover types.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. As detailed in the Specific Plan, the proposed project would be required to be consistent with the applicable Cal Green Code requirements, which includes water conservation measures and the

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	use of drought-tolerant plants within the landscaping of the proposed project. See Section 3.17, Utilities and Service Systems, for further discussion.
Action OS-3.3.3 (Parkway Irrigation): Design and monitor irrigation systems in medians and parkways to maximize efficiency and minimize nuisance runoff.	**Consistent:** See also Consistency Determination for Goal PPFS-6, above. As detailed in Chapter 2, Project Description, of the Draft EIR, the proposed project would implement a proposed stormwater basin to reduce impacts related to stormwater impacts. The proposed project would include an approved Storm Water Pollution Prevention Plan (SWPPP) pursuant to applicable requirements and standards to ensure stormwater generation and runoff nuisance are minimized. See Section 3.10, Hydrology and Water Quality, and Section 3.17, Utilities and Service Systems, for further discussion.
Action OS-3.3.5 (Water Efficient Landscape Irrigation): Enforce the requirements of State water conservation legislation when reviewing landscaping plans for new projects.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. The proposed project would be required to be consistent with all applicable State and local water conservation legislation, including the Cal Green Code. The proposed project would be required to implement water conservation measures and drought-tolerant landscaping in accordance with the Cal Green Code. See Section 3.17, Utility and Service Systems, and Appendix K, for further discussion.
Goal OS-4: Improve air quality for a healthy City and region.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and SUS-1 through 5, above. The proposed project would be developed on an infill site in an urbanized area near existing roadway and utility infrastructure and services. This Draft EIR evaluates construction and operational air emissions and sets forth feasible mitigation measures to reduce exposure to unhealthful air pollutants. Refer to Section 3.3, Air Quality, Section 3.8, Greenhouse Gas Emissions, and Section 3.17, Transportation, for further discussion.
Policy OS-4.1 (Air Quality Standards): Work to comply with State and federal ambient air quality standards and to meet mandated annual air quality reduction targets.	**Consistent:** See also Consistency Determination for Goal OS-4, above. This Draft EIR's analysis employs the Butte County Air Quality Management District CEQA guidance, which is intended to help achieve compliance with federal and State air quality standards at the local level. Refer to Section 3.3, Air Quality, Section 3.8, Greenhouse Gas Emissions, and Section 3.17, Transportation, for further discussion.

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Policy OS-4.3 (Greenhouse Gas Emissions): Implement and periodically update the Climate Action Plan to achieve incremental greenhouse gas emissions reductions.	**Consistent:** See also Consistency Determination for Goal OS-4, above. The proposed project would be developed on an urban, infill site near existing services and infrastructure. This Draft EIR considers the City's adopted Climate Action Plan Update in evaluating the proposed project's potential impacts with respect to air quality and reducing greenhouse gas emissions impacts. Among other things, the proposed project would be required to implement mitigation that significantly restricts the use of natural gas to help the City achieve its CAP Update goals. Refer to Section 3.3, Air Quality, Section 3.6, Energy, and Section 3.8, Greenhouse Gas Emissions, for further discussion.
Policy OS-5.1 (Urban/Rural Boundary): Protect agriculture by maintaining the Greenline between urban and rural uses.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and SUS-1 through 4, above. The proposed project, which would be developed on an urban, infill site long-planned for significant new growth, would maintain the Greenline by using the parcel south of the BYSP Area for long-term drainage purposes, without annexation, reinforcing the jurisdictional boundaries that coincide with the Greenline. See Section 3.2, Agriculture and Forestry Resources, for further discussion.
Policy OS-5.2 (Agricultural Resources): Minimize conflicts between urban and agricultural uses by requiring buffers or use restrictions.	**Consistent:** See also Consistency Determination for Policy OS-5.1, above. As detailed in the Specific Plan and Chapter 2, Project Description, of the Draft EIR, the proposed project would include a landscaping buffer to help reduce visual, air quality, and noise conflicts with adjacent agricultural uses. Additionally, the proposed project would be located over 240 feet from the nearest agricultural uses opposite the UPRR, exceeding the minimum buffering distance of 100 feet per Policy LU-2.6. See Section 3.2, Agriculture and Forestry Resources, for further discussion.
Action OS-5.2.1 (Agricultural Buffers): Require buffers for development adjacent to active agricultural operations along the Greenline to reduce incompatibilities, and explore opportunities for public uses within buffers.	**Consistent:** See also Consistency Determination for Policy OS-5.2, above. The proposed project would include a landscaping buffer and would be located over 240 feet from adjacent agricultural uses. See Section 3.2, Agriculture and Forestry Resources, for further discussion. Furthermore, the proposed project would not be located on any active farmland, and instead would be located on an urban, infill site that was previously used primarily for industrial uses.

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Policy OS-5.3 (Support Agriculture): Support local and regional agriculture.	**Consistent:** See also Consistency Determinations for Goal OS-5 and Policy OS-5.2, above. The proposed project, which would be developed on an urban, infill site that has long been planned for significant new growth, would not significantly impede existing or future agricultural uses, and would maintain the Greenline. For further discussion, see Section 3.2, Agriculture and Forestry Resources.
Policy OS-5.4 (Agricultural Lands): Promote the continued use of land within the city limits for local food production while working with property owners to minimize impacts to and from agricultural operations.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. The proposed project supports continuation of the organic farm located at West 16th Street and Normal Avenue. For further discussion, see Section 3.2, Agriculture and Forestry Resources.
Goal OS-6: Provide a healthy and robust urban forest.	**Consistent:** See also Consistency Determinations for Goals LU-1, LU-2, and OS-5, above. As detailed in the Specific Plan, the proposed project, which would be located on a former industrial site that has been long-planned for new significant growth, would plant street trees and park trees as part of its landscaping. The proposed project would be required to adhere to the City of Chico Approved Street and Parking Lot Tree list guided tree selection for the site. All street trees would be approved by the City's Urban Forester.
Policy OS-6.1 (Healthy Urban Forest): Ensure the continued protection and management of the urban forest to reduce energy demand, increase carbon sequestration, and reduce urban heat gain.	**Consistent:** See also Consistency Determination for Goal OS-6, above. The proposed project would plant street trees and park trees as part of its landscaping. The proposed project would be required to adhere to the recommended street and park trees contained in the BYSP or the larger City of Chico Approved Street and Parking Lot Tree list guided tree selection for the site. All street trees would be approved by the City's Urban Forester.
Action OS-6.1.1 (Urban Forest Maintenance): Maintain and expand the urban forest by: • Maintaining existing City trees through regular, scheduled service. • Planting new trees to replace those that require removal and to enhance the street tree canopy, where needed. • Requiring street and parking lot tree planting in new development.	**Consistent:** See also Consistency Determination for Goal OS-6, above. The proposed project would be developed on a former industrial site, which has long been planned for significant new growth. It would involve landscaping and tree planting as described in the Specific Plan. Development of the project would require removal of existing trees that would be subject to the replacement or in lieu fee payment requirements of Chapter 16.66 of the City of Chico's Municipal Code. Removal proposed during the subdivision stage and subsequent site development stage will each be conditioned as they occur to require the associated tree removal permits and mitigation fees. Subdivision streets and individual multi-family,

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• Working with commercial parking lot owners to improve the shade canopy. • Implementing the Municipal Code's tree protection regulations. • Using volunteer groups and property owners to plant new trees, care for newly planted trees, maintain young trees, and provide information and instructions regarding such care and maintenance.	commercial, and park projects would include the planting of multiple shade trees in substantial compliance with City standards and depictions in the BYSP.
Action OS-6.1.2 (Utility Impacts): Where feasible, require new underground utilities that are in close proximity to trees to be designed and installed to minimize impacts to trees through consultation with the Urban Forester.	**Consistent:** As required by Section 19.60.120 of the Chico Municipal Code, all new utilities shall be installed underground.
Cultural Resources and Historic Preservation	
Policy CRHP-2.1 (Infill and Historic Preservation): Integrate the values of historic preservation with infill development and adaptive reuse	**Consistent:** See also Consistency Determination for Goal CD-1, above. The proposed project, which would be developed on an urban, infill site that was formerly used primarily for industrial uses, would include the potential opportunity to adaptively reuse up to approximately 150,000 square feet across the three buildings (Warehouse, Engineering Building, and Shop). For further discussion, see Section 2, Project Description, and Section 3.5, Cultural and Tribal Cultural Resources, for further discussion.
Action CRHP-2.1.2 (Guidelines for Redevelopment of Historic Resources): Utilize the City's Design Guidelines Manual for discretionary design review to address exterior alterations proposed to historic buildings in accordance with the Historic Preservation Ordinance	**Consistent:** See also Consistency Determinations for Goal CD-1 and Policy CRHP-2.1, above. The Engineering Building and Match Block Storage Building are historic resources. Any potential adaptive reuse of these buildings would be required to be conducted in accordance with the City's Design Guidelines and the Historic Preservation Ordinance, unless an alternative process is required by the development agreement pursuant to project-specific mitigation measures adopted for the proposed project. See Section 3.5, Cultural and Tribal Cultural Resources, for further discussion.
Policy CRHP-2.2 (Adaptive Reuse): Encourage the adaptive reuse of historic buildings when the original use of the structure is no longer feasible.	**Consistent:** See also Consistency Determinations for Goal CD-1 and Policy CRHP-2.1, above. The proposed project provides for the potential opportunity to adaptively reuse up to approximately 150,000 square feet. For

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	further discussion, see Section 2, Project Description, and Section 3.5, Cultural Resources and Tribal Cultural Resources, for further discussion.
Action CRHP-2-2.1 (Exterior of Historic Structures): With discretionary actions or in compliance with the Historic Preservation Ordinance, restore or preserve the original exterior of historic structures at the time of a change in use, whenever feasible.	**Consistent:** See also Consistency Determinations for Goal CD-1 and Policy CRHP-2.1, above. As discussed more fully in Chapter 2, Project Description, of the Draft EIR, the proposed project intends to provide opportunities to potentially preserve all historic buildings on the project site. See Section 3.5, Cultural Resources and Tribal Cultural Resources, for further discussion.
Policy CRHP-2.3 (Demolition as Last Resort): Limit the demolition of historic resources to an act of last resort, to be permitted only if rehabilitation of the resource is not feasible; demolition is necessary to protect the health, safety, and welfare of its residents; or the public benefits outweigh the loss of the historic resource.	**Consistent:** See also Consistency Determinations for Goal CD-1 and Action CRHP-2-2.1, above. As discussed more fully in Chapter 2, Project Description, of the Draft EIR, the proposed project intends to provide opportunities to potentially preserve all historic buildings on the project site. See Section 3.5, Cultural Resources and Tribal Cultural Resources, for further discussion.
Policy CRHP-2.5 (Purchase of Historically Significant Buildings): Explore grant funding, partnerships, and other opportunities to purchase historically significant buildings or sites that are eligible for State or National Registers as they become available.	**Consistent:** See also Consistency Determinations for Goal CD-1 and Action CRHP-2-2.1, above. As described more fully in Chapter 2, Project Description, of the Draft EIR, The proposed project would provide potential opportunities to maintain and preserve any or all historically significant buildings on the project site in accordance with all federal, State, and local laws and regulations and consistent with availability of sufficient grant funding partnerships and other funding opportunities. See Section 3.5, Cultural Resources and Tribal Cultural Resources, for further discussion.
Action CRHP-2.5.1 (Register Listings of City-owned Properties): Pursue the listing of City-owned historic properties on the National Register of Historic Places and California Register of Historical Resources.	**Consistent:** As described more fully in Chapter 2, Project Description, of the Draft EIR, the proposed project would provide potential opportunities to preserve significant historic resources within the project site and, as stated in MM CUL-1b, any proposal specifically pursuing the adaptive reuse of the building(s) would have the opportunity to list any eligible resources on the project site on National Register of Historic Plance (NRHP) and CRHR. See Section 3.5, Cultural Resources and Tribal Cultural Resources, for further discussion.

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Safety	
Goal S-3: Protect lives and property from seismic and geologic hazards.	**Consistent:** This Draft EIR evaluates exposure to seismic and geologic hazards and concludes that all impacts would be less than significant after implementation of standard seismic safety design and building practices. Refer to Chapter 2, Project Description, and Section 3.7, Geology, Soils, and Seismicity for further discussion.
Policy S-3.1 (Potential Structural Damage): Prevent damage to new structures caused by seismic, geologic, or soil conditions.	**Consistent:** See also Consistency Determination for Goal S-3, above. This Draft EIR evaluates exposure to seismic and geologic hazards that could result in damage to new structures and concludes that all impacts would be less than significant after implementation of standard seismic safety design and building practices. Refer to Section 3.7, Geology, Soils, and Seismicity for further discussion.
Action S-3.1.1: Require all new buildings in the City to be built under the seismic requirements of the California Building Standards Code.	**Consistent:** See also Consistency Determination for Goal S-3, above. The proposed project would be required to be designed, constructed in accordance with all federal, State, and local requirements. This includes compliance with all applicable California Building Standards Code (CBC) requirements and Municipal Code requirements, among others.
Action S-3.1.2: In areas with highly expansive soils require appropriate studies and structural precautions through project review.	**Consistent:** See also Consistency Determination for Goal S-3, above. There is potential for expansive soils to occur on the project site. However, the proposed project would be required to obtain a grading permit which requires a soil engineering report or engineering geology report and the inclusion of resulting recommendations within the grading plan, including those related to expansive soils, as necessary. Refer to Section 3.7, Geology, Soils, and Seismicity for further discussion.
Goal S-4: Continue to provide effective and efficient fire protection and prevention services to Chico area residents.	**Consistent:** This Draft EIR evaluates the adequacy of fire protection and prevention services and concludes that all impacts would be less than significant through compliance with standard fire code practices and payment of a Building and Equipment Fee. Refer to Section 3.14, Public Services, for further discussion.
Policy S-4.3 (Fire Safety Standards and Programs): Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to	**Consistent:** See also Consistency Determination for Goal S-4, above. The proposed project would be subject to the latest adopted edition of the CFC at the time building permits are sought. This would

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ensure compliance with relevant codes.	ensure that the proposed project would comply with all applicable fire safety requirements. See Section 3.14, Public Services, for further discussion.
Action S-4.3.3: As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.	**Consistent:** See also Consistency Determination for Goal S-4, above. The proposed project would not be located in a State Responsibility Area (SRA) or Very High Fire Hazard Severity Zone (VHFHSZ). As supported by the Community Wildfire Protection Plan (CWPP). Nonetheless, the proposed project would provide adequate emergency access during its phased buildout and after completion. See Section 3.14, Public Services, and Section 3.18, Wildfire, for further discussion.
Policy S-4.4 (Vegetation Management): Support vegetation management and weed abatement programs that reduce fire hazards.	**Consistent:** See also Consistency Determination for Goal S-4, above. The proposed project would be required to be designed, constructed and operated in accordance with all federal, State, and local policies, laws and regulations in connection with vegetation management and weed abatement programs in order to reduce fire hazards. As discussed above, the project site is not located within a wildland fire area. See Section 3.18, Wildfire, for further discussion.
Goal S-5: Provide a safe, secure environment with responsive police services for the community.	**Consistent:** This Draft EIR evaluates the adequacy of police protection and concludes that all impacts would be less than significant. Refer to Section 3.14, Public Services.
Policy S-5.1 (Police Services): Continue to provide fundamental police services based upon rapid response to emergencies and response, control and intervention in conduct that threatens life and property.	**Consistent:** See also Consistency Determination for Goal S-5, above. The proposed project would be adequately served by the CPD and would be required to pay all applicable impact fees to help the City continue fund police equipment and facilities. See Section 3.14, Public Services, for further discussion.
Policy S-5.5 (Design to Deter Crime): Support the deterrence of crime through site planning and community design.	**Consistent:** See also Consistency Determination for Goal S-5, above. As detailed further in the Specific Plan, the proposed project would be required to be thoughtfully designed, constructed and operated in accordance with all federal, State, and local standards, which would help to support the deterrence of crime. See Section 3.14, Public Services, for further discussion.
Action S-5.5.1 (Crime Deterring Design): Consider the incorporation of design features such as strategic window placement, lighting techniques, and landscaping into	**Consistent:** See also Consistency Determinations for Goal S-5 and Policy S-5.5, above.

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development projects to discourage criminal activity.	As discussed more fully in the Specific Plan, the proposed project would incorporate design and site planning elements, including adequate lighting, considerations of window and landscaping placement, and other crime deterring security features to help discourage criminal activity.
Policy S-5.5 (Design to Deter Crime): Support the deterrence of crime through site planning and community design.	**Consistent:** See also Consistency Determination for Goal S-5, above. As detailed further in the Specific Plan, the proposed project would be required to be thoughtfully designed, constructed and operated in accordance with all federal, State, and local standards, which would help to support the deterrence of crime. See Section 3.14, Public Services, for further discussion.
Action S-5.5.1 (Crime Deterring Design): Consider the incorporation of design features such as strategic window placement, lighting techniques, and landscaping into development projects to discourage criminal activity.	**Consistent:** See also Consistency Determinations for Goal S-5 and Policy S-5.5, above. As discussed more fully in the Specific Plan, the proposed project would incorporate design and site planning elements, including adequate lighting, considerations of window and landscaping placement, and other crime deterring security features to help discourage criminal activity.
Goal S-6: As part of the project review process in wildland fire areas, require consideration of emergency evacuation routes and defensible buffer areas.	**Consistent:** See also Consistency Determination for Goal S-4, above. The proposed project would not be located in a SRA or VHFHSZ. Nonetheless, individual project phases will be reviewed and conditioned to ensure adequate buffers from local fuel sources during project buildout. See Section 3.18, Wildfire, for further discussion.
Policy S-6: Promote safe air operations by limiting the height of structures and regulating uses that would have adverse impacts on airport safety.	**Consistent:** The proposed project is not located near an airport and would not affect the safety of air operations. The height limits of future structures within the project would not affect airport safety, as discussed in more detail in Section 3.9, Hazards and Hazardous Materials.
Goal S-8: Reduce the potential for public exposure to hazardous materials or the accidental releases of toxic or hazardous substances.	**Consistent:** To reduce the potential for public exposure to hazardous materials that were identified within certain areas of the site, the proposed project would be required to implement MM HAZ-1. Additionally, the proposed project would be required to be in compliance with all applicable federal, State, and local regulations and codes related to toxic and hazardous substances in order to reduce potential public exposure to less than significant levels. Section 3.9, Hazards and Hazardous Materials, for further discussion.

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Goal S-9: Protect the community from risks posed by climate change	**Consistent:** The proposed project is consistent with the City's CAP Update which is a qualified CAP. The proposed project would not have a significant greenhouse gas (GHG) emissions impact with the implementation of mitigation and would contribute its "fair share" of what will be required to achieve California's long-term climate goal of carbon neutrality by 2045. See Section 3.6, Energy, and Section 3.8, Greenhouse Gas Emissions, for further discussion.
Policy S-9.1 (Climate Adaptation and Resiliency): Promote public safety through the development of climate adaptation and resiliency strategies to reduce risks associated with climate change.	**Consistent:** See also Consistency Determination for Goal S-9, above. The proposed project would be consistent with relevant actions within the CAP Update, as discussed in more detail in Section 3.8, Greenhouse Gas Emissions. Additionally, project development would be subject to the City's land use entitlement and building plan check review processes, for which development projects in the City are required to comply with all applicable standards, including the CBC and City of Chico regulations. See Section 3.6, Energy, for further discussion.
Noise	
Goal N-1: To benefit public health, welfare and the local economy, protect noise-sensitive uses from uses that generate significant amounts of noise.	**Consistent:** This Draft EIR evaluates project-related noise impacts to surrounding receptors, which is consistent with the goal of protecting sensitive uses from uses that generate significant amounts of noise. Refer to Section 3.12, Noise for further discussion.
Policy N-1.1 (New Development and Transportation Noise): New development of noise-sensitive land uses will not be permitted in areas exposed to existing or planned transportation noise sources that exceed the levels specified in Table N-1 (Table 3.13-6), unless the project design includes measures to reduce exterior and interior noise levels to those specified in Table N-1 (Table 3.13-6).	**Consistent:** See also Consistency Determination for Goal N-1, above. Noise levels for multi-family and single-family residential within the project site would not exceed the exterior noise standard of 65 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL). All other project uses would be required to adhere to applicable noise standards. Refer to Section 3.12, Noise, for further discussion.
Policy N-1.2 (New Development and Non-Transportation Noise): New development of noise-sensitive land uses will not be permitted in areas exposed to existing non-transportation noise sources that exceed the levels specified in Table N-2 (Table 3.13-7),	**Consistent:** See also Consistency Determination for Goal N-1, above. Noise levels for multi-family and single-family residential uses within the project site would not exceed the exterior noise standard of 70 dBA CNEL with the implementation of MM NOI-2. All other

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unless the project design includes measures to reduce exterior noise levels to the unadjusted levels specified in Table N-2 (Table 3.13-7).	project uses would be required to adhere to applicable noise standards. Refer to Section 3.12, Noise, for further discussion.
Policy N-1.3 (Acoustical Analysis): Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, require an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-3.	**Consistent:** This Draft EIR includes a noise assessment/acoustical analysis that is consistent with the requirements set forth in Table N-3. All noise impacts were found to be less than significant after mitigation or less than significant and did not require mitigation. Refer to Section 3.12, Noise for further discussion.
Policy N-1.4 (Roadway Improvement Projects): Where proposed roadway improvement projects are likely to expose noise-sensitive land uses to noise levels exceeding the standards in Table N-1 (Table 3.13-6) or an increase of 10 dB Ldn or more in ambient noise levels, conduct an acoustical analysis to determine the level of impacts and to identify feasible noise mitigation measures that could be included in the project design to minimize impacts.	**Consistent:** See also Consistency Determination for Goal N-1, above. The project-specific analysis included in this Draft EIR found that implementation of the proposed project would not increase noise levels beyond significant levels. Refer to Section 3.12, Noise, for further discussion.
Policy N-1.5 (Proposed Projects Near Railroads): Require site-specific noise studies for noise-sensitive projects which may be affected by railroad noise, and incorporate noise attenuation measures into the project design to reduce any impacts to the levels specified in Table N-1 (Table 3.13-6).	**Consistent:** See also Consistency Determination for Goal N-1, above. All active railroad tracks are over 100 feet from the BYSP Area, and would therefore meet the Federal Transit Administration (FTA) screening criteria and have been determined to result in less than significant impacts. Refer to Section 3.12, Noise for further discussion.
Policy N-1.6 (Construction Activity): Maintain special standards in the Municipal Code to allow temporary construction activity to exceed the noise standards established in this element, with limits on the time of disturbance to nearby noise-sensitive uses.	**Consistent:** This Draft EIR evaluate construction-related noise, and includes a feasible mitigation measure limiting construction activities to the specified days and time periods identified in the Municipal Code. Refer to Section 3.12, Noise for further discussion.
Goal N-2: Encourage noise attenuation methods that support the goals of the General Plan.	**Consistent:** See also Consistency Determination for Goal N-1, above.

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	Aside from the construction noise mitigation measure referenced above, no other noise attenuation methods are necessary to achieve acceptable noise levels given the location of the proposed project uses. As previously discussed, the construction noise mitigation measure is consistent with Policy N-1.6. The proposed project would adhere to all applicable noise standards. Refer to Section 3.12, Noise for further discussion.
Policy N-2.1 (Well-Designed Noise Mitigation): Utilize effective noise attenuation measures that complement the Community Design Element's Goals.	**Consistent:** See also Consistency Determination for Goal N-2, above. Aside from the construction noise mitigation measure referenced above, no other noise attenuation methods are necessary to achieve acceptable noise levels. As previously discussed, the construction noise mitigation measure is consistent with Policy N1.6. The proposed project would adhere to all applicable noise standards. Refer to Section 3.12, Noise for further discussion.
Policy N-2.2 (Partners in Noise Reduction): Consult with public and private organizations to encourage reduction of the noise levels of activities that impact large portions of the community.	**Consistent:** See also Consistency Determination for Goal N-2, above. The proposed project would implement MM NOI-1 through MM NOI-3 to reduce all potential noise and groundborne vibration impacts that could result from the proposed project. Additionally, the proposed project would be required to adhere to all federal, State, and local noise regulations, and would therefore reduce all impacts in this regard. levels. Refer to Section 3.12, Noise for further discussion.
Goal N-3: Promote and enforce the City's noise standards.	**Consistent:** See also Consistency Determinations for Goals N-1 and N-2, above. The Draft EIR for the proposed project found that, with the implementation of MM NOI-1 through MM NOI-3 and adherence to all applicable City noise standards, impacts in this regard would be less than significant. Refer to Section 3.12, Noise for further discussion.
Source: FirstCarbon Solutions (FCS). 2024. City of Chico. 2011. Chico 2030 General Plan.	

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.11.7 - Cumulative Impacts

Level of Cumulative Significance Before Mitigation

The geographic scope of the cumulative impact analysis for Land Use and Planning is the BYSP Area and portions of the City of Chico and unincorporated Butte County adjacent to the BYSP Area. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, would result in a cumulatively significant impact with respect to lands use and planning. This analysis then considers whether incremental contribution of the impacts associated with implementation of the proposed project would be cumulatively considerable and thus significant. Both conditions must apply for cumulative effects to rise to the level of significance.

The proposed project and other cumulative projects in the immediate vicinity are subject to the goals and policies of the City's General Plan and other planning documents, as applicable. Prior to approval, the proposed project, as well as other cumulative projects, must be found consistent with the City's General Plan and other applicable City planning documents. Consistency with the City's applicable General Plan policies (and any other applicable planning documents) would ensure compliance and orderly development of the proposed project and other related cumulative projects such that cumulative impacts related to established communities and conflicts with plans would be less than significant. Moreover, the proposed project's incremental contribution to cumulative impacts would not be cumulatively considerable.

As discussed in Impact LU-1, the proposed project would not physically divide an established community. The proposed project would develop an infill site and increase connectivity within the BYSP Area and between the BYSP Area and the surrounding community. Therefore, the proposed project is not expected to have a cumulatively considerable contribution to this already less than significant cumulative impact in terms of a physical division of an established community.

As demonstrated in Impact LU-2, the proposed project is consistent with the applicable provisions of the General Plan and other relevant planning documents with respect to policies adopted for purposes of mitigating an environmental impact, and thus the proposed project's contribution to this already less than significant impact would not be cumulatively considerable. Therefore, there would be a less than significant cumulative impact with regard to land use and planning as a result of implementing the proposed project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

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3.12 - Noise

3.12.1 - Introduction

This section describes the existing noise setting and potential effects from implementation of the proposed project on the project site and its surrounding area. Descriptions and analysis in this section are based, in part, on noise modeling performed by FirstCarbon Solutions (FCS). The noise modeling output is included in this Draft Environmental Impact Report (Draft EIR) as Appendix H. The following public comments were received during the Notice of Preparation (NOP) scoping period related to noise.

- Concerns related to train noise. Suggestions to build a wall with a vertical garden or something green to mitigate the noise.
- Questions about whether noise from trains is going to be monitored, and if an adequate sound wall will be installed.
- Concerns related to construction noise. Requests to limit construction to weekdays to reduce noise, and questions related to the mitigation of construction noise.
- Concerns about noise related to heavy truck traffic.
- Concerns about noise related to the proposed ball field.
- Concerns about noise related to entertainment events envisioned at the proposed site.
- General concerns related to noise in the surrounding quiet neighborhood.

3.12.2 - Environmental Setting

Characteristics of Noise

Noise is generally defined as unwanted or objectionable sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in the extreme, hearing impairment. Noise effects can be caused by pitch or loudness. *Pitch* is the number of complete vibrations or cycles per second of a wave that result in the range of tone from high to low; higher-pitched sounds are louder to humans than lower-pitched sounds. *Loudness* is the intensity or amplitude of sound.

Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit, which expresses the ratio of the sound pressure level being measured to a standard reference level. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Only audible changes in existing ambient or background noise levels are considered potentially significant.

The human ear is not equally sensitive to all frequencies within the audible sound spectrum, so sound pressure level measurements can be weighted to better represent frequency-based sensitivity of average healthy human hearing. One such specific "filtering" of sound is called "A-weighting." A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Because decibels are logarithmic units, they cannot be added or subtracted by ordinary arithmetic means. For example, if one noise source produces a noise level of 70 dB, the addition of another noise source with the same noise level would not produce 140 dB; rather, they would combine to produce a noise level of 73 dB.

Noise Descriptors

There are many ways to rate noise for various intervals, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source, as well as ground absorption, atmospheric conditions (wind, temperature gradients, and humidity) and refraction, and shielding by natural and manmade features. Sound from point sources, such as an air conditioning condenser, a piece of construction equipment, or an idling truck, radiates uniformly outward as it travels away from the source in a spherical pattern.

The attenuation or sound drop-off rate is dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in noise models: soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA per each doubling of the distance

(dBA/DD) is typically observed over soft ground with landscaping, as compared with a 6 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources, such as traffic noise on a roadway, a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3 dBA/DD drop-off rate for hard-site conditions. Table 3.12-1 briefly defines these measurement descriptors and other sound terminology used in this section.

Table 3.12-1: Sound Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object which, when transmitted by pressure waves through a medium such as air, can be detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient Noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which represents the squared ratio of sound pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
Equivalent Noise Level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Maximum and Minimum Noise Levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-Night Level (DNL or L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m. (nighttime).
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7:00 p.m. and 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring between 10:00 p.m. and 7:00 a.m.
Source: Data compiled by FirstCarbon Solutions (FCS). 2023.	

Traffic Noise

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is "barely perceptible"; for reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA. The truck mix on a given roadway also has an effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase.

Stationary Noise

A stationary noise producer is any entity in a fixed location that emits noise. Examples of stationary noise sources include machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities. Furthermore, while noise generated by the use of motor vehicles over public roads is preempted from local regulation, although the use of these vehicles is considered a stationary noise source when operated on private property such as at a construction site, a truck terminal, or warehousing facility. The emitted noise from the producer can be mitigated to acceptable levels either at the source or on the adjacent property through the use of proper planning, setbacks, block walls, acoustic-rated windows, dense landscaping, or by changing the location of the noise producer.

The effects of stationary noise depend on factors such as characteristics of the equipment and operations, distance and pathway between the generator and receptor, and weather. Stationary noise sources may be regulated at the point of manufacture (e.g., equipment or engines), with limitations on the hours of operation, or with provision of intervening structures, barriers or topography.

Construction activities are a common source of stationary noise. Construction-period noise levels are higher than background ambient noise levels but ultimately cease once construction is complete. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 3.12-2 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3.12-2: Typical Construction Equipment Maximum Noise Levels

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	Yes	95
Auger Drill Rig	No	85
Vibratory Pile Driver	No	95
Jackhammers	Yes	85
Pneumatic Tools	No	85
Pumps	No	77
Scrapers	No	85
Cranes	No	85
Portable Generators	No	82
Rollers	No	85
Bulldozers	No	85
Tractors	No	84
Front-End Loaders	No	80
Backhoe	No	80
Excavators	No	85
Graders	No	85
Air Compressors	No	80
Dump Truck	No	84
Concrete Mixer Truck	No	85
Pickup Truck	No	55

Notes:
dBA = A-weighted decibel
Source: Federal Highway Administration (FHWA) 2006. Highway Construction Noise Handbook, August.

Noise from Multiple Sources

Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Therefore, sound pressure levels in decibels are logarithmically added on an energy summation basis. In other words, adding a new noise source to an existing noise source, both producing noise at the same level, will not double the noise level. Instead, if the difference between two noise sources is 10 dBA or more, the louder noise source will dominate, and the resultant noise level will be equal to the noise level of the louder source. In general, if the difference between two noise sources is 0—1 dBA, the resultant noise level will be 3 dBA higher than the louder noise source, or both sources if they are equal. If the difference between two noise sources is 2—3 dBA, the resultant noise level will be 2 dBA above the louder noise source.

If the difference between two noise sources is 4—10 dBA, the resultant noise level will be 1 dBA higher than the louder noise source.

Characteristics of Vibration

Groundborne vibration consists of rapidly fluctuating motion through a solid medium, specifically the ground, which has an average motion of zero and in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The effects of groundborne vibration typically only cause a nuisance to people, but in extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room, and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Because of the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels—denoted as LV—and is based on the reference quantity of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB."

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as rms velocity in units of decibels of 1 microinch per second, with the unit written in VdB. Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. Human perception to vibration starts at levels as low as 67 VdB. Annoyance due to vibration in residential settings starts at approximately 70 VdB.

Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration. Construction activities, such as blasting, pile driving and operating heavy earthmoving equipment, are common sources of groundborne vibration. Construction vibration impacts on building structures are generally assessed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 3.12-3.[1]

Table 3.12-3: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	rms Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58

[1] Federal Highway Administration (FHWA). 2006. Highway Construction Noise Handbook. August.

Construction Equipment	PPV at 25 Feet (inches/second)	rms Velocity in Decibels (VdB) at 25 Feet
Bulldozer (small)	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer (large)	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112

Notes:
PPV = peak particle velocity
rms = root mean square
VdB = velocity in decibels
Source: Compilation of scientific and academic literature, generated by Federal Transit Administration (FTA) and Federal Highway Administration (FHWA).

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform medium, while groundborne vibrations travel through the earth, which may contain significant geological differences. Factors that influence groundborne vibration include:

- **Vibration source:** Type of activity or equipment, such as impact or mobile, and depth of vibration source;
- **Vibration path:** Soil type, rock layers, soil layering, depth to water table, and frost depth; and
- **Vibration receiver:** Foundation type, building construction, and acoustical absorption.

Among these factors that influence groundborne vibration, there are significant differences in the vibration characteristics when the source is underground compared to at the ground surface. In addition, soil conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Vibration propagation is more efficient in stiff clay soils than in loose sandy soils, and shallow rock seems to concentrate the vibration energy close to the surface, and can result in groundborne vibration problems at large distance from the source. Factors such as layering of the soil and depth to the water table can have significant effects on the propagation of groundborne vibration. Soft, loose, sandy soils tend to attenuate more vibration energy than hard, rocky materials. Vibration propagation through groundwater is more efficient than through sandy soils. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil type, but it has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

Existing Noise

Traffic Noise Levels

Traffic noise depends primarily on traffic speed and the proportion of truck traffic. For purposes of this analysis, existing traffic noise levels along selected roadway segments on the project site and in the project vicinity were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). Site-specific information was entered, such as roadway traffic volumes, roadway active width, source-to-receiver distances, travel speed, noise source and receiver heights, and the percentages of automobiles, medium trucks, and heavy trucks that the traffic is made up of throughout the day, among other variables. The modeled Average Daily Traffic (ADT) volumes were obtained from the traffic analysis prepared by Fehr & Peers for the proposed project. A summary of the modeling results is shown in Table 3.12-4, with the full model inputs and outputs set forth in Appendix H.

Table 3.12-4: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane
Ivy Street–9th Street to 12th Street	2,800	< 50	< 50	< 50	57.1

Roadway Segment	ADT	Centerline to 70 L_{dn} (feet)	Centerline to 65 L_{dn} (feet)	Centerline to 60 L_{dn} (feet)	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane
Ivy Street–12th Street to Project Boundary	1,600	< 50	< 50	< 50	54.6
14th Street–Project Boundary to Chestnut Street	40	< 50	< 50	< 50	38.6
14th Street–Chestnut Street to Normal Avenue	180	< 50	< 50	< 50	45.1
16th Street–Chestnut Street to Normal Avenue	530	< 50	< 50	< 50	49.8
18th Street–Project Boundary to Normal Avenue	50	< 50	< 50	< 50	39.6
18th Street–Normal Avenue to Salem Street	140	< 50	< 50	< 50	44.0
20th Street–Normal Avenue to Salem Street	90	< 50	< 50	< 50	42.1
W. 22nd Street–Normal Avenue to Park Avenue	100	< 50	< 50	< 50	42.0

Notes:
ADT = Average Daily Traffic
dBA = A-weighted decibel
L_{dn} = day/night average sound level
Source: FCS 2023.

Railroad Noise Levels

Railroad noise levels depend on numerous factors, such as train speed, number of engines used, track conditions (e.g., welded vs. jointed), the condition of train wheels, and shielding provided by intervening terrain. Noise levels can also be affected by the sounding of train horns and the operation of roadside signaling devices. For purposes of this analysis, wayside noise levels were calculated based on average train speeds, train lengths, and the assumption that the number of trains would be distributed equally among daytime and nighttime hours.

The western edge of the Barber Yard Specific Plan (BYSP) Area abuts active Union Pacific Railroad (UPRR) right-of-way. According to the Noise chapter of the General Plan Update Draft EIR (dated September 2010), approximately 18 freight trains and two Amtrak passenger trains utilize this rail line on a daily basis, including during nighttime hours. The nearest signalized grade crossing is located over 2,100 feet from the BYSP Area's nearest boundary, so roadside signaling devices and train horns would not significantly impact project site noise levels. The projected 65 dBA CNEL noise contour extends to approximately 325 feet from the track centerline, which includes 100 feet of the closest western edge of the BYSP Area. Therefore, rail activity along the UPRR would contribute to noise levels within the BYSP Area.

Existing Stationary Noise Sources

As explained above, stationary noise sources consist of any entity in a fixed location that emits noise. Examples of stationary noise sources include machinery, engines, energy production, and other mechanical or powered equipment and activities such as loading and unloading or public assembly that may occur at commercial, industrial, manufacturing, or institutional facilities.

The existing stationary noise sources in the BYSP Area include parking lots, mechanical ventilation systems, and truck loading noise in light industrial facilities on the southeast border of the BYSP Area.

Existing Noise-Sensitive Land Uses

Noise-sensitive land uses generally consist of those uses where exposure to noise would result in adverse effects, as well as uses for which quiet is an essential element of their intended purpose. Residential dwellings are of primary concern, because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other typical noise-sensitive land uses include hospitals, convalescent facilities, hotels, religious institutions, libraries, and other uses where low noise levels are essential.

The existing noise-sensitive land uses in the vicinity of the project site include multi-family and single-family residential and school land uses. Potential noise impacts associated with implementation of the proposed project to these existing noise-sensitive land uses are analyzed in this section.

3.12.3 - Regulatory Framework

Federal

Noise Control Act

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

This act authorized the United States Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table 3.12-5 below. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an Leq duration of 24 hours. The USEPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

Table 3.12-5: Summary of EPA Recommended Noise Levels to Protect Public Welfare

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.
Source: EPA 1974.		

The noise effects associated with an outdoor L_{dn} of 55 dBA are summarized in Table 3.12-6, below. At 55 dBA Ldn, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no substantial community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

Table 3.12-6: Summary of Human Effects in Areas Exposed to 55 dBA L_{dn}

Type of Effects Speech – Indoors Magnitude of Effect	Type of Effects Speech – Indoors Magnitude of Effect
Speech—Indoors	100 percent sentence intelligibility (average) with a 5 dBA margin of safety.
Speech—Outdoors	100 percent sentence intelligibility (average) at 0.35 meters (approx. 1⅛ feet). 99 percent sentence intelligibility (average) at 1.0 meters (approx. 3¼ feet). 95 percent sentence intelligibility (average) at 3.5 meters (approx. 11½ feet).
Average Community Reaction	None evident; 7 dBA below level of significant complaints and threats of legal action and at least 16 dBA below “vigorous action.”
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Toward Area	Noise essentially the least important of various factors.
Source: United States Environmental Protection Agency (EPA). 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March.	

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees.

Among the agencies now regulating noise are the Occupational Safety and Health Administration (OSHA), which limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours or 105 dB L_{eq} or less for 1 continuous hour; the United States Department of Transportation (USDOT), which assumed a significant role in noise control through its various operating agencies; and the Federal Aviation Administration (FAA), which regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the FHWA. Finally, the federal government encourages local jurisdictions use their land use regulatory authority to site new development in such a way that "noise-sensitive" uses are either prohibited from being sited adjacent to a highway, or alternatively, that developments are planned and constructed in such a manner that minimize potential noise impacts.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, local jurisdictions are limited to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

Federal Transit Administration Standards and Guidelines

FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment document (FTA 2006). The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 3.12-7.

Table 3.12-7: Federal Transit Administration Construction Vibration Impact Criteria

Building Category	PPV (in/sec)	Approximate VdB
I. Reinforced-Concrete, Steel or Timber (no plaster)	0.5	102
II. Engineered Concrete and Masonry (no plaster)	0.3	98
III. Nonengineered Timber and Masonry Buildings	0.2	94
IV. Buildings Extremely Susceptible to Vibration Damage	0.12	90

Notes:
PPV = peak particle velocity
VdB = velocity in decibels
Source: Federal Transit Administration (FTA) 2018. Transit Noise and Vibration Impact Assessment Manual.

State

The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. In addition to the following documents, the State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses.

California General Plan Guidelines

Established in 1973, the California Department of Health Services Office of Noise Control was instrumental in developing regularity tools to control and abate noise for use by local agencies. One

significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to delineate compatibility of sensitive uses with various incremental levels of noise.[2]

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise/land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. As discussed further below, because the proposed project is also subject to review under the State of California Environmental Quality Act (CEQA), the impact thresholds from for potential noise and vibration impacts set forth in Appendix G of the CEQA Guidelines are relevant in applying the foregoing guidelines.

California Building Standards Code

The State of California has established noise insulation standards for new hotels, motels, apartment houses, and dwellings (other than single-family detached housing). These requirements are provided in the 2022 California Building Standards Code (CBC) (California Code of Regulations [CCR] Title 24), effective as of January 1, 2023.[3] As provided in the CBC, the noise insulation standards set forth an interior standard of 45 dBA CNEL as measured from within the structure's interior in any habitable room with all doors and windows closed, and specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. When such structures are located within a 65-dBA CNEL (or greater) exterior noise contour associated with a traffic noise along a roadway, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL threshold. These noise insulation standards are achieved through design and/or building materials that would offset any significant noise source in the vicinity of the building.

Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Assembly Bill No. 1307

Assembly Bill No. 1307 went into effect January 1, 2024. This bill clarifies that "for residential projects, the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment."[4] Therefore, this analysis does not address potential noise impacts from future project occupants and their guests on sensitive receptors in the project vicinity (i.e., "CEQA in reverse").

[2] California Department of Health Services Office of Noise Control, "Land Use Compatibility for Community Noise Environments Matrix," 1976.
[3] California Building Standards Commission. 2022. California Building Standards Code (CCR Title 24), July 1.
[4] California Legislative Information. Assembly Bill No. 1307. Website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1307. Accessed October 22, 2024.

Local

The City of Chico (City) has established Noise Compatibility Standards for residential and nonresidential land uses in the Noise Element of the City of Chico 2030 General Plan[5] and in the City of Chico Municipal Code.[6]

Chico General Plan

The Chico General Plan contains goals, objectives, and policies that address noise within the City of Chico. The following General Plan goals, objectives, and policies are relevant to this analysis:

Guiding Policies: Noise

Goal N-1 **To benefit public health, welfare and the local economy, protect noise-sensitive uses from uses that generate significant amounts of noise.**

Policy N-1.1 New Development and Transportation Noise–New development of noise-sensitive land uses will not be permitted in areas exposed to existing or planned transportation noise sources that exceed the levels specified in Table N-1 (Table 3.12–8), unless the project design includes measures to reduce exterior and interior noise levels to those specified in Table N-1 (Table 3.12–8).

Policy N-1.2 New Development and Non-Transportation Noise–New development of noise-sensitive land uses will not be permitted in areas exposed to existing non-transportation noise sources that exceed the levels specified in Table N-2 (Table 3.12–9), unless the project design includes measures to reduce exterior noise levels to the unadjusted levels specified in Table N-2 (Table 3.12–9).

Policy N-1.3 Acoustical Analysis–Where proposed projects are likely to expose noise-sensitive land uses to noise levels exceeding the City's standards, require an acoustical analysis as part of environmental review so that noise mitigation measures may be identified and included in the project design. The requirements for the content of an acoustical analysis are outlined in Table N-3 (Table 3.12–10).

Policy N-1.4 Roadway Improvement Projects–Where proposed roadway improvement projects are likely to expose noise-sensitive land uses to noise levels exceeding the standards in Table N-1 (Table 3.12-8) or an increase of 10 dB L_{dn} or more in ambient noise levels, conduct an acoustical analysis to determine the level of impacts and to identify feasible noise mitigation measures that could be included in the project design to minimize impacts.

Action N-1.4.1 Roadway Project Significance Criteria–For roadway improvement projects where an acoustical analysis demonstrates that it is not practical to reduce traffic noise levels

[5] City of Chico. 2017. Chico 2030 General Plan, Chapter 13 Noise and Safety. March.
[6] City of Chico. 2014. Chico Municipal Code, Website: https://codelibrary.amlegal.com/codes/chico/latest/chico_ca. Accessed October 22, 2024.

to be consistent with Table N-1 (Table 3.12-8), the following criteria will be used as a test of significance for the environmental review:

- Where existing traffic noise levels are less than 65 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +8 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.
- Where existing traffic noise levels range between 65 and 70 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.
- Where existing traffic noise levels are greater than 70 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.

Policy N-1.5 Proposed Projects Near Railroads–Require site-specific noise studies for noise-sensitive projects which may be affected by railroad noise, and incorporate noise attenuation measures into the project design to reduce any impacts to the levels specified in Table N-1 (Table 3.12-8).

Policy N-1.6 Construction Activity–Maintain special standards in the Municipal Code to allow temporary construction activity to exceed the noise standards established in this element, with limits on the time of disturbance to nearby noise-sensitive uses.

Goal N-2 Encourage noise attenuation methods that support the goals of the General Plan.

Policy N-2.1 Well-Designed Noise Mitigation–Utilize effective noise attenuation measures that complement the Community Design Element's Goals.

Action N-2.1.1 Noise Control Measures–Limit noise exposure through the use of insulation, building design and orientation, staggered operating hours, and other techniques. Utilize physical barriers such as landscaped sound walls only when other solutions are unable to achieve the desired level of mitigation.

Policy N-2.2 Partners in Noise Reduction–Consult with public and private organizations to encourage reduction of the noise levels of activities that impact large portions of the community.

Action N-2.2.3 Noise from State Highways–Request that Caltrans provide freeway sound walls with aesthetic design features, noise-reducing pavement, and speed reductions along state highways adjacent to residential areas where existing noise levels exceed 67 dBA.

Goal N-3 Promote and enforce the City's noise standards.

Policy N-3.1 City Noise Control Program–Maintain a noise enforcement program to identify and resolve problems concerning noise in the community.

Action N-3.1.1 Noise Program Duties–Enforce the City's Noise Ordinance by processing complaints, conducting on-site testing of noise sources, and sharing information on the effects of noise issues in the community

Action N-3.1.2 Street Noise Environment–Periodically assess the noise levels associated with City streets by reviewing traffic count data as an indication of increasing traffic noise.

Table 3.12-8: Maximum Allowable Noise Levels from Transportation Noise Sources

Noise-Sensitive Land Use[1]	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	65[3]	45	—
Transient Lodging	—	45	—
Hospitals, Nursing Homes	65[3]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	65[3]	—	40
Office Buildings	—	—	45
Schools, Libraries, Museums	65[3]	—	45
Playgrounds, Neighborhood Parks	70	—	—

Notes:
CNEL = Community Noise Equivalent Level
dB = decibel
L_{dn} = day/night average sound level
L_{eq} = equivalent sound level
[1] Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior noise levels at the patios or balconies of multi-family dwellings, a common area or on-site park may be designated as the outdoor activity area. For noise-sensitive land uses that do not include outdoor activity areas, only the interior noise standard shall apply.
[2] As determined for a typical worst-case hour during periods of use.
[3] Where it is not possible to reduce noise in outdoor activity areas to 65 dB L_{dn}/CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dB L_{dn}/CNEL may be allowed provided that interior noise levels are in compliance with this table.
Source: City of Chico. 2017. Chico 2030 General Plan, Chapter 13 Noise and Safety. March.

Table 3.12-9: Stationary Noise Sources

Noise Level Descriptor (dBA)	Exterior Noise Level (dBA)	
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Average-Hourly Noise Level (L_{eq})	55	50
Intermittent Noise Level (L_2 or L_{max})	75	65

Notes:
dBA = A-weighted decibel
L_{dn} = day/night average sound level
L_{eq} = equivalent sound level
L_2 = the dBA level exceeded 2 percent of the time.

Noise Level Descriptor (dBA)	Exterior Noise Level (dBA)	
	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
L_{max} = maximum noise/sound level [1] Noise levels are for planning purposes and may vary from the standards of the City's Noise Ordinance, which are for enforcement purposes. [2] Noise levels shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Noise level standards do not apply to mixed-use residential units established in conjunction with industrial or commercial uses provided interior noise levels remain below 45 dB Ldn/CNEL. [3] In areas where the existing ambient noise level exceeds the established daytime or nighttime standard, the existing level shall become the respective noise standard and an increase of 3 dBA or more shall be significant. Noise levels shall be reduced 5 dBA if the existing ambient hourly Leq is at least 10 dBA lower than the standards. [4] Noise standards are to be applied at outdoor activity areas with the greatest exposure to the noise source. When it is not practical to mitigate exterior noise levels at patio or balconies of multi-family dwellings, a common area or on-site park may be designated as the outdoor activity area. Source: City of Chico. 2017. Chico 2030 General Plan, Chapter 13 Noise and Safety. March.		

Table 3.12-10: Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:
A. Be the financial responsibility of the applicant.
B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
D. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn}, CNEL, and the standards of Table N-1 or Table N-2, as applicable, and compare those levels to the adopted policies of the Noise Element. Where the noise source consists of intermittent single events, address the impact on sleep disturbance.
E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.
Source: City of Chico. 2017. Chico 2030 General Plan, Chapter 13 Noise and Safety. March.

City of Chico Municipal Code

Chapter 9, Article 3 (Noise) and Chapter 19, Article 60 (General Property Development and Use Standards), of the Chico Municipal Code establish excessive noise standards and exemptions to those standards. The following portions of the Municipal Code are relevant to this analysis:

9.38.030 Residential property noise limits

A. No person shall produce, suffer or allow to be produced by human voice, machine, animal, or device, or any combination of same, on residential property, a noise level at any point outside of the property plane that exceeds, at any point outside of the property plane, seventy (70) dBA between the hours of seven a.m. and nine p.m. or sixty (60) dBA between the hours of nine p.m. and seven a.m.
B. No person shall produce, suffer or allow to be produced by human voice, machine, animal, or devices or any combination of same, on multi-family residential property, a noise level more than sixty (60) dBA three feet from any wall, floor, or ceiling inside any dwelling unit on the same property, when the windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise source or sources may be located.

9.38.040 Commercial and industrial property noise limits

No person shall produce, suffer or allow to be produced by human voice, machine, animal, or device, or any combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds seventy (70) dBA.

9.38.060 Categorical exemptions

The following activities or sources of noise are exempt from the provisions of this chapter:

B. Construction and Alteration of Structures.
    1. Notwithstanding any other provision of this chapter, between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays, and 7:00 a.m. and 9:00 p.m. on other days, construction, alteration or repair of structures shall be subject to one of the following limits:
        a. No individual device or piece of equipment shall produce a noise level exceeding eighty-three (83) dBA at a distance of twenty-five (25) feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five (25) feet from the equipment.
        b. The noise level at any point outside of the property plane of the project shall not exceed eighty-six (86) dBA.
    2. Notwithstanding any other provision of this chapter, including but not limited to subsection B.1 of this section, for new residential development projects, or construction, alteration or repairs taking place in commercial or industrial zones between June 15—September 15, of each calendar year, work will be allowed between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays, and 6:00 a.m. and 9:00 p.m. on other days. Construction, alteration or repairs of structures shall be subject to one of the following limits:

a. No individual device or piece of equipment shall produce a noise level exceeding eighty-three (83) dBA at a distance of twenty-five (25) feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five (25) feet from the equipment.
b. The noise level at any point outside of the property plane of the project shall not exceed eighty-six (86) dBA.

19.60.080 Noise.

A. Noise Control. Noise shall be controlled at the source through berms, buffer yards, insulation, structure design and orientation, staggered operating hours, and other techniques. Where necessary, noise barriers shall attenuate noise to acceptable levels and the barriers shall be landscaped to reduce any negative visual impacts on the community, in compliance with the Noise Element of the General Plan. All development shall comply with Chapter 9.38 (Noise) of the Municipal Code.
B. Manufacturing Noise Levels. Manufacturing uses shall comply with Section 19.46.040-B-4 (Manufacturing/Industrial zoning district performance standards), where applicable.
C. Railroad Noise Buffers. Noise buffers or sound attenuation shall be installed for all new adjacent residential developments in compliance with the Noise Element of the General Plan.

19.46.040 Manufacturing/industrial zoning district performance standards.

2. Ground Vibration. No approved land use shall generate ground vibration perceptible without instruments at any point along or outside of the property line of the use, except for motor vehicle operations.

3.12.4 - Methodology

Construction Noise Analysis Methodology

For purposes of a conservative evaluation, a reasonable worst-case scenario was analyzed assuming each piece of modeled equipment would operate simultaneously at the nearest reasonable locations to the closest noise-sensitive receptor for the loudest phase of construction. Noise emission levels set forth in FHWA's Highway Construction Noise Handbook were used to ascertain the noise generated by specific types of construction equipment. The construction noise impact was evaluated in terms of maximum levels (L_{max}). Analysis requirements were based on the sensitivity of nearby receptors and the Noise Ordinance specifications.

Traffic Noise Modeling Methodology

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions on the project site and vicinity. Traffic data used in the model was obtained

from the Traffic Analysis prepared for the proposed project (Appendix H).[7] The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The FHWA-RD-77-108 Model arrived at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level. Adjustments were then made to account for the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway); the total ADT and the percentage of ADT that flows during the day, evening, and night; the travel speed; the vehicle mix on the roadway; a percentage of the volume of automobiles, medium trucks, and heavy trucks; the roadway grade; the angle of view of the observer exposed to the roadway; and the site conditions ("hard" or "soft") as they related to the absorption of the ground, pavement, or landscaping.

The level of traffic noise depends on the three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires. Because of the logarithmic nature of traffic noise levels, a doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. Based on the FHWA community noise assessment criteria, this change is "barely perceptible." For reference, a doubling of perceived noise levels would require an increase of approximately 10 dBA.

The model analyzed the noise impacts from the nearby roadways onto the project site and vicinity, which consists of the area that has the potential of being impacted from the on-site noise sources as well as the project-generated traffic on the nearby roadways. The roadways were analyzed based on a single-lane-equivalent noise source combining both directions of travel. A single-lane-equivalent noise source exists when the vehicular traffic from all lanes is combined into a theoretical single lane that has a width equal to the distance between the two outside lanes of a roadway, which provides almost identical results to analyzing each lane separately where elevation changes are minimal.

Stationary Noise Source Analysis Methodology

The proposed project would generate noise as a result of future development that could contain new stationary noise sources, such as mechanical ventilation systems, parking lot activity, truck loading/unloading activity, and sport fields activity. To provide a conservative analysis, the highest end of the range of reference noise levels for these stationary noise sources was used to calculate the reasonable worst-case hourly average noise levels from each noise source. These noise levels were then compared to the City's applicable noise performance threshold to determine whether these noise sources would result in a substantial increase in excess of this standard.

Vibration Impact Analysis Methodology

The City of Chico does not have adopted criteria for construction or operational groundborne vibration impacts. Therefore, the FTA's vibration impact criteria and modeling and analysis methodology were utilized to evaluate potential vibration impacts. The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are

[7] Fehr & Peers. 2024. Transportation Entitlement Review/Non-CEQA Intersection Operations Analysis for the Barber Yard Specific Plan – Updated. October.

published in its Transit Noise and Vibration Impact Assessment document[8] and are summarized in Table 3.12-5 in the regulatory discussion above.

3.12.5 - Thresholds of Significance

The City, as Lead Agency, in its discretion has decided to utilize the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether noise impacts resulting from the implementation of the proposed project would be considered significant. Specifically, there would be a significant impact if the proposed project would cause:

a) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

b) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

c) Generation of excessive groundborne vibration or groundborne noise levels.

d) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (The proposed project would have no significant impacts related to this threshold given the location of the project site; therefore, this criteria is addressed in Chapter 4, Effects Found not to be Significant).

It should be noted that the significance criteria Impact(a), above, is from the Land Use and Planning section of the CEQA Guidelines Appendix G checklist questions. However, this question addresses impacts related to conflicts with land use plans, which would include project-related conflicts to the noise land use compatibility standards of the General Plan and City of Chico Municipal Code. Therefore, these noise-related impacts are addressed in this section.

3.12.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and operation of the proposed project and provides feasible mitigation measures where appropriate.

Noise Levels That Would Conflict with Any Land Use Plan, Policy, or Regulation

Impact NOI-1:	**The proposed project could cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.**

Impact Analysis

Impacts related to noise land use compatibility consistency are limited to operational impacts. Temporary construction noise impacts are discussed under Impact NOI-2, below. A significant operational noise impact would occur if the proposed project would result in a conflict with the

[8] Federal Transit Administration (FTA). 2006. Transit Noise and Vibration Impact Assessment. May.

City's adopted noise land use compatibility policies adopted for the purpose of avoiding or mitigating an environmental impact.

The City has established maximum allowable noise level compatibility criteria (as determined at location of receiving land use) for transportation noise sources, shown in Table 3.12-8 above. For example, the maximum allowable exterior noise level as measured at the outdoor activity area of a residential land use is 65 dBA CNEL; and the maximum allowable interior noise level is 45 dBA CNEL as measured inside a residential land use. Where it is not feasible to reduce noise in outdoor activity areas to 65 dBA CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dBA CNEL may be allowed provided that interior noise levels standards are met for the receiving land use.

The dominant noise sources in the project vicinity are traffic noise on local roadways and railroad activity. As shown in Table 3.12-4, existing traffic noise levels range from 39.6 dBA to 57.1 dBA CNEL along modeled roadway segment in the project vicinity. These noise levels are considered normally acceptable to new residential land use developments.

As noted in the Environmental Setting, Existing Noise discussion above, the western edge of the BYSP Area abuts active UPRR right-of-way. The projected 65 dBA CNEL noise contour of this rail line extends to approximately 325 feet from the track centerline, which includes 100 feet of the closest western edge of the BYSP Area. Therefore, any noise-sensitive land uses that would potentially be constructed in this area would be exposed to railroad noise levels in excess of the City's normally acceptable standard of 65 dBA CNEL which would result in a significant impact.

Therefore, mitigation would be required to reduce potential impacts to noise-sensitive land use development that could occur within 325 feet of the railroad centerline. Implementation of MM NOI-1 would ensure that noise-sensitive land uses within the impact area would be shielded, and this potential impact would be reduced to less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-1 Noise Land Use Compatibility Mitigation Plan

As part of the City's design review process for proposed noise-sensitive land use development projects (such as, but not limited to, multi-family residential land uses) that would be located within 325 feet of the active railroad mainline, and prior to issuance of building permits, the developer of the subject specific individual development proposal shall demonstrate one of the following:

(1) Outdoor active use areas are shielded from railroad noise source by structures or a masonry wall (such shielding must blocking the line of sight between the noise source and receptor, with no gaps)B; or

(2) An acoustic study (prepared consistent with the requirements set forth in the Noise Element of the Chico 2030 General Plan) shows that the proposed development would remain below the City's applicable noise land use compatibility standards for the proposed land use. The subject developer shall submit the acoustic study to the Community Development Director for review and approval. Upon approval by the City, the proposed acoustical design features shall be incorporated into the subject development proposal's construction documents. Noise reduction design features may include, but are not limited to, locating outdoor active use areas of noise-sensitive land uses to be shielded by structures (buildings, enclosures, or sound walls).

Level of Significance After Mitigation

Less than significant impact.

Substantial Noise Increase in Excess of Standards

Impact NOI-2:	**The proposed project could generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Impact Analysis

Temporary Construction Noise Impacts

A significant impact would occur if project-related, noise producing construction activities result in a substantial temporary increase in ambient noise levels in excess of the established standards. The City's Noise Ordinance identifies that construction activity is exempt from any special noise permitting during the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holiday or 7:00 a.m. and 9:00 p.m. on any other days. However, the City's noise exemption for construction activities is subject to one of the following limits:

1) Any individual device or piece of equipment from producing a noise level exceeding 83 dBA at a distance of 25 feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to 25 feet from the equipment.
2) The noise level at any point outside of the property plane of the project shall not exceed 86 dBA.

Development that could occur from implementation of the proposed project would result in construction activities within the project site. Noise impacts from construction activities would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities within proximity to sensitive land uses as applied against the applicable exemption with limitations noted above. This analysis accounts for existing sensitive receptors near the project site, as well as future on-site sensitive receptors since the proposed project would be built over time.

Off-site Construction Noise Impact (Construction Traffic)

In terms of construction-related noise, two types of short-term noise impacts would occur during site preparation and project construction. The first type would result from the increase in construction-related traffic flow on local streets associated with the transport of workers, equipment, and materials to and from the project site, which would incrementally increase noise levels on access roads leading to the project site.

Even though construction traffic is a temporary impact, this analysis relies on the significance criteria of Action N-1.4.1 of the General Plan. Therefore, the following criteria is used as a test of significance for traffic noise impacts for construction-related traffic:

- Where existing traffic noise levels are less than 65 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +8 dB L_{dn} increase in project-related traffic noise levels will be considered significant.
- Where existing traffic noise levels range between 65 and 70 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to project-related traffic will be considered significant.
- Where existing traffic noise levels are greater than 70 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to project-related traffic will be considered significant.

Based on applicant provided information, the construction haul trips could average up to 54 trips per day during the site preparation phase when off-haul of soil would occur. These trips would use West 16th Street and West 22nd Street to access the site, with approximately 40 percent of these trips using West 16th Street, and 60 percent of the trips using West 22nd Street. These construction trips were modeled using the FHWA highway traffic noise prediction model (FHWA RD-77-108). The resultant noise levels were weighed and summed over a 24-hour period to determine the CNEL values. The traffic noise modeling input and output files—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are included in Appendix H. Table 3.12-11 shows a summary of the calculated traffic noise levels for traffic conditions for existing conditions and conditions with these reasonable maximum daily construction haul trips, as measured at 50 feet from the centerline.

Table 3.12-11: Calculated Traffic Noise Levels Without and With Construction Haul Trips

Roadway Segment	CNEL (dBA) 50 feet from Centerline		
	Existing No Project	Existing Plus Construction Haul Trips	Project Increase
West 16th Street–Chestnut Street to Normal Avenue	49.8	51.1	1.3
West 22nd Street–Normal Avenue to Park Avenue	42.0	47.9	5.9

CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
Source: FirstCarbon Solutions (FCS). 2023.

Since the resulting traffic noise levels would remain below 65 dBA, which is considered normally acceptable for residential land uses, an increase of more than 8 dBA would be considered a significant increase. However, the greatest traffic noise increase with the additional project construction haul trips would be a 5 dBA increase on the modeled roadway segment of West 22nd Street. Therefore, short-term construction-related noise impacts associated with the highest average daily construction haul trips would be less than significant.

On-site Construction Noise Impacts (Construction Equipment)

The second type of short-term noise impact is related to noise generated during site preparation, grading, and construction activities (i.e., non-mobile source). As discussed above, construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on-site. Thus, the noise levels vary as construction progresses. Despite the variety in the types and sizes of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction noise ranges to be categorized by work phase. Table 3.12–2 shows typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment, which have been used for purposes of this analysis.

Noise from grading activities is typically the foremost concern when evaluating a project's construction noise impact, as grading activities often require extensive use of heavy-duty, diesel-powered earthmoving equipment. For the proposed project, grading would have the greatest—and thus noisiest—construction equipment requirements, as multiple grading vehicles working in concert would be required to rough grade individual subdivision improvement areas within the project site. Other construction phases would have reduced equipment requirements and/or would involve less daily usage of equipment. For purposes of a conservative analysis, reasonable worst-case construction noise levels from the simultaneous operation of multiple pieces of heavy construction equipment on the project site were assumed, based on the expected closest distance from the acoustic center of construction activity to the nearest sensitive receptor. The calculation sheet for these values is provided in Appendix H.

All construction activity noise levels are governed by the standards set forth in the City's Municipal Code, which exempts construction noise generally from applicable restrictions, subject to the limiting of construction activities to specified permissible hours and the applicable noise limits (as noted above). All construction activity within the project site would be subject to these restrictions, and would be able to meet them due to the large size of the project site (and thus distance from existing sensitive receptors) and ability to avoid simultaneous use of large pieces of equipment along the outer residential boundary of the construction area. Mitigation would be required to implement best management noise reduction practices and to avoid using multiple pieces of construction equipment within 50 feet of adjacent residential uses during construction unless site-specific noise reduction measures are in place. For example, implementation of temporary sound barriers along a project boundary can provide at-grade level noise reductions of up to 10 dBA as measured at an adjacent property. This would ensure that construction noise levels would be reduced to levels that would be considered less than significant, even when using multiple pieces of construction equipment along the residential boundary is necessary. Therefore, Implementation of Mitigation

Measure (MM) NOI-1, would ensure construction noise impacts would be reduced to less than significant.

Operational Mobile Source Noise Impacts

A significant impact would occur if project-generated traffic would result in a substantial increase in traffic noise levels at existing or future noise-sensitive uses in excess of established standards. The City has established maximum allowable noise level compatibility criteria (as determined at location of receiving land use) for transportation noise sources, shown in Table 3.13-8 above. For example, the maximum allowable exterior noise level as measured at the outdoor activity area of a residential land use is 65 dBA CNEL; and the maximum allowable interior noise level is 45 dBA CNEL as measured inside a residential land use. Where it is not feasible to reduce noise in outdoor activity areas to 65 dBA CNEL or less using all feasible noise reduction measures, an exterior noise level of up to 70 dBA CNEL may be allowed provided that interior noise levels standards are met for the receiving land use.

The FHWA highway traffic noise prediction model (FHWA-RD-77-108) was used to evaluate existing and future project-related traffic noise conditions along modeled roadway segments on the project site and in the vicinity. Traffic modeling was performed using the data provided by Fehr & Peers in the traffic analysis prepared for the proposed project. The resultant noise levels were weighed and summed over a 24-hour period to determine the CNEL values. The traffic noise modeling input and output files—including the 60 dBA, 65 dBA, and 70 dBA CNEL noise contour distances—are included in Appendix H. Table 3.12-12 shows a summary of the calculated traffic noise levels for traffic conditions without and with the proposed project, as measured at 50 feet from the centerline.

Table 3.12-12: Calculated Traffic Noise Levels Without and With the Proposed Project

Roadway Segment	CNEL (dBA) 50 feet from Centerline					
	Existing No Project	Existing Plus Project	Exceed Exterior Noise Standard of 65 dBA CNEL? (Yes/No)	Cumulative No Project	Cumulative Plus Project	Exceed Exterior Noise Standard of 65 dBA CNEL? (Yes/No)
Ivy Street–9th Street to 12th Street	57.1	62.3	No	57.1	62.0	No
Ivy Street–12th Street to Project Boundary	54.6	61.7	No	54.9	61.4	No
14th Street–Project Boundary to Chestnut Street	38.6	60.7	No	45.6	60.9	No
14th Street–Chestnut Street to Normal Avenue	45.1	60.3	No	47.4	60.7	No
16th Street–Chestnut Street to Normal Avenue	49.8	62.4	No	50.7	62.5	No
18th Street–Project Boundary to Normal Avenue	39.6	57.5	No	51.0	57.5	No

Roadway Segment	CNEL (dBA) 50 feet from Centerline					
	Existing No Project	Existing Plus Project	Exceed Exterior Noise Standard of 65 dBA CNEL? (Yes/No)	Cumulative No Project	Cumulative Plus Project	Exceed Exterior Noise Standard of 65 dBA CNEL? (Yes/No)
18th Street–Normal Avenue to Salem Street	44.0	57.1	No	45.6	57.2	No
20th Street–Normal Avenue to Salem Street	42.1	56.9	No	45.6	56.7	No
West 22nd Street–Normal Avenue to Park Avenue	42.0	57.8	No	42.0	58.5	No

Note:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
Source: FirstCarbon Solutions (FCS). 2023.

As shown in Table 3.12-12, all the quieter roadway segments (those modeled to be 50 dBA CNEL or lower under Existing No Project conditions), would experience traffic noise increases that could be perceived as more than a doubling of their existing street noise (i.e., increases greater than 10 dBA CNEL), despite the fact that Cumulative Plus Project noise levels are modeled to remain below the significance threshold of 65 dBA CNEL. The project is estimated to build out over a period of 18 years, which would spread the effect of increased traffic volumes over approximately that time period, as development occurs. None of the modeled roadway segments would experience an increase in traffic noise levels that would exceed the City's most restrictive exterior noise level standard of 65 dBA CNEL at any receiving sensitive land use. Therefore, the proposed project would not result in a substantial increase in traffic noise levels in excess of established standards and the impact would be less than significant.

Operational Stationary Source Noise Impacts

A significant impact would occur if operational noise levels generated by stationary noise sources associated with the proposed project would exceed the City's maximum allowable exterior noise levels from non-transportation sources found in Table N-2 of the General Plan (see Table 3.12-9, above). Pursuant to these thresholds, it is prohibited to generate operational noise levels in excess of 75 dBA L_{max} during daytime hours (7:00 a.m. and 10:00 p.m.), or in excess of 65 dBA L_{max} during nighttime hours (10:00 p.m. and 7:00 a.m.), as measured at the outdoor activity area of the nearest receptor. The General Plan thresholds for new stationary sources also prohibit average noise levels above 55 dBA L_{eq} during daytime hours and above 50 dBA L_{eq} during nighttime hours. It is acknowledged by the General Plan that the noise levels in Table N-2 are for planning purposes and may vary from the standards of the City's Noise Ordinance, which are for enforcement purposes. Therefore, for purposes of this analysis, these General Plan noise standards are applied to the following impact analysis.

The proposed project would include new stationary noise sources. These stationary noise sources could involve a wide spectrum of uses and activities, including commercial operations, parking lot/loading and unloading activities, playgrounds, sports fields, HVAC units, generators, lawn maintenance equipment, and swimming pool pumps. These would be potential stationary sources of noise that could affect existing noise-sensitive receptors near the project site as well as future on-site sensitive receptors. The following provides an analysis of potential impacts associated with the loudest of these types of stationary noise sources.

Truck Loading/Unloading Activity

Typical maximum noise levels from truck loading and unloading activity are 65 dBA to 75 dBA L_{max} as measured at 50 feet. These maximum noise levels include noise from associated truck loading/unloading activities, including maneuvering, trailer loading and unloading, backup alarms or beepers, and docking noise.

Parking Lot Activity

Parking activities include vehicles cruising at slow speeds, doors shutting, or cars starting, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet.

Mechanical Ventilation Equipment

New commercial-facility grade mechanical ventilation equipment currently available on the market is rated as having operational noise levels up 50 dBA to 60 dBA L_{eq} at 25 feet from the operating equipment.

Sport Fields Activities

Other potential stationary noise sources associated with implementation of the proposed project include activities associated with proposed sports fields and recreational land use development. Typical noise sources associated with these types of land uses include people yelling or cheering. Typical noise levels of people conversing, speaking loudly, and cheering range from approximately 50 dBA to 70 dBA L_{max} at 3 feet, for normal to loud adult voices.

The following analysis considers conservative worst-case scenario potential impacts from these noise sources at the closest potential off-site and future on-site sensitive receptors.

Based on the proposed zoning and permitted use areas and the assumptions shown in Exhibit 2-5, potential truck loading areas from future facilities could be located as close as 200 feet from off-site sensitive receptor land uses. Proposed parking areas could be located as close as 25 feet from off-site sensitive receptor land uses. Commercial grade mechanical ventilation equipment could be located as close as 200 feet from off-site sensitive receptors. The active use areas of proposed sport fields where multiple spectators and participants could congregate could be located approximately 350 feet from off-site sensitive receptor land uses.

However, with the proposed zoning and permitted use areas and the assumptions shown in Exhibit 2-5, proposed residential land uses within the BYSP Area could be located within 100 feet of potential truck loading areas from future facilities. Proposed parking areas could be located as close as 25 feet from on-site sensitive receptor land uses. Commercial grade mechanical ventilation

equipment could be located within 100 feet of on-site sensitive receptors. The active use areas of proposed sport fields where multiple spectators and participants could congregate could be located approximately 50 feet from on-site sensitive receptor land uses.

Table 3.12-13 shows a summary of the calculated potential noise levels from project-related stationary noise sources as measured at the nearest off-site and on-site sensitive receptor land uses. The calculation sheets with the detailed modeling assumptions for these values are provided in Appendix H.

Table 3.12-13: Stationary Operational Noise Impact Summary

Noise Source	Calculated dBA (Lmax)	City's Daytime Noise Performance Thresholds (Lmax)	City's Nighttime Noise Performance Thresholds (Lmax)	Exceed City's Daytime/ Nighttime Threshold? (Yes/No)
At the Nearest **Off**-Site Residential Receptor				
Truck Loading/Unloading Activity	63	75 dBA	65 dBA	No/No
Parking Lot Activities	74			No/**Yes**
Mechanical Ventilation Equipment	42			No/No
Sport Field Activities	20			No/No
At the Nearest **On**-Site Residential Receptor				
Truck Loading/Unloading Activity	65	75 dBA	65 dBA	No/No
Parking Lot Activities	74			No/**Yes**
Mechanical Ventilation Equipment	48			No/No
Sport Field Activities	46			No/No

*Notes:
dBA = A-weighted decibel
L_{max} = maximum sound level
Source: FirstCarbon Solutions (FCS). 2024.

As shown in Table 3.12-13, parking lot activity could exceed the City's nighttime noise performance standard as measured at the nearest residential receptors under the proposed tentative zoning and site plan. However, depending on the ultimate location of proposed land uses developed pursuant to the proposed project, these types of stationary noise sources could result in noise levels that exceed the City's nighttime maximum noise threshold of 65 dBA L_{max}, as measured at the outdoor active use area of a receiving residential land use. Therefore, mitigation is required to reduce this potential impact.

Operational activity noise levels can be mitigated at the source and/or at the receiving land use using setbacks, soundwalls, acoustic-rated windows, or by siting stationary sources on sides of buildings opposite sensitive receptors (using buildings as shielding). For example, at a distance of 150 feet, unobstructed truck loading activity noise levels would attenuate to 65 dBA L_{max}. Noise from unobstructed parking activity would attenuate to below 65 dBA L_{eq}. at a distance of 60 feet. Unobstructed noise from commercial grade mechanical ventilation system operations would attenuate to below 65 dBA L_{max} at a distance of 15 feet. It should also be noted that properly sited structural shielding (buildings or sound walls) can provide up to 15 dBA or greater additional noise reduction. The calculation sheet for these operational noise levels is included in Appendix H.

Therefore, implementation of MM NOI-2, requiring preparation of a site-specific acoustical analysis and implementation of an approved stationary source noise reduction plan to identify appropriate design measures, would ensure stationary source operational noise impacts generated by the proposed project would be reduced to below the City's nighttime noise standards of 65 dBA L_{max} and 50 dBA L_{eq}. With implementation of MM NOI-2, stationary source noise impacts would be less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-2a Construction Noise Mitigation Plan

Each specific individual development proposal shall adhere to the permitted construction hours as delineated in the City's Municipal Code, if feasible. In addition, prior to the issuance of demolition, grading, site improvement plans, and/or construction permits in connection with an application for a specific individual development proposal, the subject developer(s) of each such individual proposal that may include the operation of multiple pieces of heavy construction equipment within 50 feet of the property line of noise-sensitive receptors (e.g., residences, hospitals, schools) shall either (1) demonstrate and expressly state on project drawings that multiple pieces of equipment will not be necessary or allowed to operate within 50 feet of the property line of noise-sensitive receptors, or (2) the subject developer shall hire an acoustics consultant to conduct a site-specific acoustical analysis to confirm whether there would be any site-specific exceedance of applicable standards. The analysis shall assess consistency of the proposed construction activities with the exemption criteria for construction activities set forth under Chico Municipal Code Section 9.38.060, once the final construction equipment list that will be used for the subject demolition, grading activities and/or construction activities is determined. The site-specific acoustical analysis shall be prepared by the specific developer and subject to approval by the City. If the analysis determines that the subject construction activities would not meet the exemption criteria, then specific measures to attenuate the identified temporary noise impact to minimize exceedances of the relevant noise permit exemption criteria is achieved

shall be outlined in the analysis and reviewed and approved by the City and implemented in the subject proposal. Specific measures may include, but are not limited to, the following best management practices:

- Install temporary sound barriers between sensitive receptor locations and the construction area where the heavy equipment will be operating.
- Stationary equipment (such as generators and air compressors) and equipment maintenance and staging areas shall be located as far from existing noise-sensitive land uses, as feasible.
- Post a construction site notice near the construction site access point or in an area that is clearly visible to the public. The notice shall include the following: job site address; permit number, name, and phone number of the contractor and owner; dates and duration of construction activities; construction hours allowed; and the phone numbers of the City's Planning Department and the construction contractor where noise complaints can be reported and logged.
- If construction equipment is equipped with back-up alarm shut offs, switch off back-up alarms and replace with human spotters, as feasible.
- Restrict haul routes and construction-related traffic to the least noise-sensitive roadways.
- Reduce non-essential idling of construction equipment to no more than 5 minutes.
- Ensure that all construction equipment is monitored and properly maintained in accordance with the manufacturer's recommendations to minimize noise.
- Fit all construction equipment with properly-operating mufflers, air intake silencers, and engine shrouds, no less effective than as originally equipped by the manufacturer, to minimize noise emissions.
- To the extent feasible, use acoustic enclosures, shields, or shrouds for stationary equipment such as compressors and pumps.
- Shut off generators when generators are not needed.
- Coordinate deliveries to reduce the potential of trucks waiting to unload and idling for long periods of time.
- Grade surface irregularities on construction sites to prevent potholes from causing vehicular noise.
- Minimize the use of impact devices such as jackhammers, pavement breakers, and hoe rams. Where feasible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete or asphalt demolition and removal.

The final noise reduction measures to be implemented and their associated details, as set forth in the subject Construction Noise Mitigation Plan, shall be included on all subject construction and building documents and/or construction management plans and submitted for verification to the City; implemented by the construction contractor through the duration of the subject construction phase; and discussed at the subject pre-demolition, -grade, and/or -construction meetings.

MM NOI-2b Stationary Source Noise Reduction Plan

As part of the City's design review process for individual commercial and multi-family residential projects, and prior to issuance of building permits, the developer of the subject specific individual development proposal shall demonstrate one of the following:

(1) Major noise-generating elements (e.g., truck loading docks within 150 feet of a sensitive receptor, or surface parking areas within 60 feet of a sensitive receptor, or commercial grade mechanical ventilation equipment within 15 feet of a sensitive receptor, etc.), are shielded from nearby residential uses by structures or a masonry wall (such shielding must blocking the line of sight between the noise source and receptor, with no gaps), or

(2) An acoustic study (prepared consistent with the requirements set forth in the Noise Element of the Chico 2030 General Plan) shows that the operational noise associated with any major noise-generating elements (e.g., truck loading docks, large parking areas, commercial grade mechanical systems, etc.), would remain below the City's nighttime noise standards of 65 dBA L_{max} and 50 dBA L_{eq}. Examples of major noise-generating elements include, but are not necessarily limited to, unshielded truck loading docks within 150 feet of a sensitive receptor, or surface parking areas within 60 feet of a sensitive receptor, or commercial grade mechanical ventilation equipment within 15 feet of a sensitive receptor. The subject developer shall submit the acoustic study to the Planning Director for review and approval. Upon approval by the City, the proposed acoustical design features shall be incorporated into the subject development proposal's construction documents. Noise reduction design features may include, but are not limited to, locating stationary noise sources on the subject construction area to be shielded by structures (buildings, enclosures, or sound walls) or by using equipment that has a quieter rating.

Level of Significance After Mitigation

Less than significant impact.

Groundborne Vibration/Noise Levels

Impact NOI-3: The proposed project could result in generation of excessive groundborne vibration or groundborne noise levels.

Impact Analysis

This section analyzes both construction and operational groundborne vibration impacts.

Short-term Construction Vibration Impacts to Off-site Receptors

This analysis uses the FTA's vibration impact criteria to analyze construction vibration impacts. The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment Manual. The

construction vibration impact criteria are summarized in Table 3.12-7 in the regulatory section above.

A significant impact would occur if the construction of the proposed project could result in exposure of people or structures on-site or in the project vicinity to groundborne vibration levels in excess of levels established by the FTA's Construction Vibration Impact Criteria. Development of the proposed project would require the use of construction equipment, which are vibration generators.

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. In the setting section above, Table 3.12-3 provides approximate vibration levels for construction equipment, several of which would be used at the project site to conduct construction activities.

Based on the type of proposed land use development, it is reasonable to assume that the use of impact pile driving as a construction method would not be used. Therefore, of the variety of equipment used during construction, a large vibratory roller that could be used for roadway construction and building pad compaction would produce the greatest groundborne vibration levels. Large vibratory rollers produce groundborne vibration levels ranging up to 0.201 inch per second (in/sec) PPV at 25 feet from the operating equipment. Therefore, if the use of a large vibratory roller were to occur within 25 feet of a structure, or if the use of other heavy construction equipment were to operate within 15 feet of a structure, the resulting vibration levels could exceed the FTA threshold of 0.2 PPV for structures of conventional wood frame construction, resulting in a potentially significant impact. Therefore, mitigation would be required to reduce this potential impact. Construction vibration sources can be mitigated to acceptable levels through techniques such as using alternate equipment, providing required setbacks for the operation of certain types of equipment, or by digging temporary trenches between the source and the receptor.

Therefore, implementation of MM NOI-3, which requires preparation of a Construction Vibration Monitoring Plan for any construction activity involving use of a large vibratory roller within 25 feet of a structure or other heavy construction equipment within 15 feet of a structure, would ensure that these vibration level impacts generated by future development projects would be reduced to a less than significant impact.

Operational Vibration Impacts

A significant operational impact would occur if ground vibration would be perceptible without instruments at any point along or outside of the property line, which would result in a conflict with Section 19.46.040 of the Municipal Code.

Based on the proposed types of land uses of the proposed project, it is not anticipated to include any permanent sources of vibration that would expose persons in the future on-site structures or people or those in the project vicinity to excessive groundborne vibration levels.

However, the existing UPRR line on the west side of the Plan Area is an existing source of groundborne vibration. The FTA's vibration screening distance is 100 feet from an active rail line for residential land use development.[9] As the active travel tracks are over 100 feet from the Plan Area, it would meet the FTA's screening criteria and it is anticipated that vibration levels from railroad activity on the UPRR rail line would result in a less than significant impact on proposed land use development. Therefore, project operational groundborne vibration level impacts would be considered less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM NOI-3 Construction Vibration Reduction Plan

Prior to issuance of grading and/or building permits for any future development projects that would necessitate the use of large vibratory rollers within 25 feet of a structure, or the use of any other heavy construction equipment within 15 feet of a structure, a note shall be provided on grading and building plans indicating that during grading and construction the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction-related vibration impacts:

- No impact pile driving shall be permitted.
- Submit a Construction Vibration Reduction Plan that identifies specific techniques, such as the depth and location of temporary trenching, that would minimize potential vibration impacts to the impacted structure.
- The individual project owner/developer shall submit the Construction Vibration Reduction Plan to the Planning Director for review and approval prior to issuance of building permits. Upon approval by the City, the construction vibration reduction measures shall be incorporated into the construction documents.

Level of Significance After Mitigation

Less than significant impact.

3.12.7 - Cumulative Impacts

The geographic scope of the cumulative noise analysis is limited by the range of potential noise impacts. Noise impacts tend to be localized; therefore, noise impacts for traffic and stationary noise sources are limited to approximately 500 feet from the source. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, would result in a cumulatively significant impact with respect to noise. This analysis then considers whether incremental contribution of the impacts associated with implementation of the proposed project

[9] Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment. September.

would be significant. Both conditions must apply for cumulative effects to rise to the level of significance.

Construction Noise Impacts

The City has elected, in its discretion, to utilize compliance with its Municipal Code provisions regarding construction hours as the significance threshold for a cumulative construction noise impact. Regarding potential cumulative construction noise impacts, it is possible there could be multiple cumulative projects being constructed at the same time the proposed project is under construction. The closest cumulative project is located over 1,000 feet (0.22 mile) from the project site. Every cumulative project would be required to adhere to applicable construction hour restrictions and any and all relevant identified performance standards; in addition, it is reasonable to assume that cumulative projects would also implement other site-specific improvement measures/best management practices consistent therewith to help further reduce construction-related noise, as would the proposed project. In addition, construction noise is typically localized and temporary in nature. For these reasons, construction-related cumulative noise impacts would be less than significant. Additionally, the proposed project's contribution to this already less than significant cumulative impact would not be cumulatively considerable given the temporary, localized nature of the proposed project's construction impacts coupled with implementation of above-referenced mitigation measures. Therefore, implementation of the proposed project would not result in a cumulatively considerable contribution to construction noise impacts, and therefore this impact would be less than significant.

Traffic Noise Impacts

The significance threshold for a cumulative traffic noise impact would be a substantial permanent increase in traffic noise levels in the vicinity of the project along any roadway segment that already experiences noise levels in excess of normally acceptable standards for adjacent land uses. As shown in Table 3.12-12, none of the modeled roadway segments currently experience traffic noise levels that exceed the City's most restrictive noise land use compatibility standards. Therefore, there is no existing cumulative impact to which the project would contribute. In addition, Plus Project traffic noise levels would similarly not exceed the City's noise land use compatibility standards. Therefore, implementation of the project would not result in a potentially significant cumulatively considerable contribution to traffic noise impacts on roadway segments in the BYSP Area. This impact would be less than significant.

Stationary Source Noise Impacts

The significance threshold for a cumulative stationary source operational noise impact would be a substantial temporary noise increase at any location that is already exposed to excessive noise levels from stationary source operational noise. As mentioned above, noise impacts tend to be localized; therefore, noise impacts for stationary noise sources are limited to approximately 500 feet from the source. There are no major permanent stationary noise sources within 500 feet of the project boundaries that would constitute an existing cumulative noise impact. Therefore, since there is not an existing cumulative stationary source noise impact in the BYSP Area, implementation of the Specific Plan would result in a less than significant cumulative impact related to stationary source

noise. In addition, as shown in the stationary source noise impact discussion, future development phases of the Specific Plan that would have stationary noise sources would be required to prepare a site-specific analysis and incorporate design measures, where necessary, to ensure potential impacts would be reduced to less than significant as measured at sensitive receptor property planes. Therefore, implementation of the project would not result in a potentially significant cumulatively considerable contribution to stationary source noise impacts in the BYSP Area. This impact would be less than significant.

Construction Vibration Impacts

Construction-related groundborne vibration impacts are very localized; therefore, only areas within approximately 50 feet of a construction site could potentially be affected by groundborne vibration resulting from construction activities. There are no major long-term development projects undergoing construction in the BYSP Area that would constitute an existing cumulative groundborne vibration impact. Therefore, there is not a cumulative groundborne vibration impact in the BYSP Area. The proposed project's construction and operational vibration levels would not exceed annoyance thresholds as discussed above. Because vibration is a highly localized phenomenon, there would be no possibility for vibration associated with the project to combine with vibration from other projects because of their distances from the project site. Therefore, implementation of the project would not result in a potentially significant cumulatively considerable contribution to the already less than significant cumulative construction vibration impacts in the BYSP Area. This impact would be less than significant.

Operational Groundborne Vibration Impacts

The only cumulatively considerable contribution to groundborne vibration conditions in the BYSP Area would result from introduction of new permanent sources of groundborne vibration to an existing impacted environment. The only major source of groundborne vibration in the BYSP Area is railroad activity along the existing UPRR line on the west side of the project boundary. However, implementation of the Specific Plan would not introduce any new permanent sources of groundborne vibration to the Plan Area and would not increase railroad activity. Therefore, implementation of the Specific Plan would not result in a potentially significant cumulatively considerable contribution to vibration conditions in the BYSP Area. This impact would be less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.13 - Population and Housing

3.13.1 - Introduction

This section describes existing population and housing in the City of Chico (City) and Butte County (County) as well as the relevant regulatory framework. This section also evaluates the potential impacts related to population and housing that could result from implementation of the proposed project. Information included in this section is based, in part, on databases and reports maintained by City, County, California Department of Finance (DOF), California Employment Development Department (EDD), Butte County Association of Governments (BCAG) and the U.S. Census Bureau.

Public comments received during the Notice of Preparation (NOP) scoping period mentioned a general concern regarding population increase but did not identify any specific environmental issues in this regard that are within CEQA's purview.

3.13.2 - Environmental Setting

Population

Butte County

Current Population Estimates

According to the July 2023 U.S. Census Bureau population estimates, Butte County had a total population of 207,172. Between 2020 and 2023, there was a 2.1 percent population decrease in the County from 211,632 to 207,172 persons.[1] According to the DOF, the County had an estimated population of 206,579, as of January 1, 2023, which decreased 0.5 percent to an estimated population of 205,928 as of January 1, 2024.[2] This population decline is consistent with the overall decline in population in California, consisting of an approximately 2.7 percent decline between April 2020 and July 2023.[3] Table 3.14-1 below provides the Butte County population estimates for years 2020 through 2024.[4]

[1] United States Census Bureau. 2024. Annual and Cumulative Estimates of resident Population Change for Counties and County Rankings: April 1, 2020 to July 1, 2023. Website: https://www.census.gov/data/datasets/time-series/demo/popest/2020s-counties-total.html. Accessed October 3, 2024.

[2] California Department of Finance (DOF). 2024. E-1: City/County Population Estimates with Annual Percentage Change. Website: https://dof.ca.gov/forecasting/demographics/estimates-e1/. Accessed October 3, 2024.

[3] United States Census Bureau. 2022. Annual and Cumulative Estimates of Resident Population Change for the United States, Regions, States, District of Columbia, and Puerto Rico and Region and State Rankings: April 1, 2020, to July 1, 2022. Website: https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html. Accessed October 3, 2024.

[4] U.S. Census Bureau population data provided herein last updated on June 25, 2024, using the most recent data available.

Table 3.13-1: Butte County Population Estimates 2020-2024

	2020	2021	2022	2023	2024
U.S. Census Bureau	210,151	206,336	207,369	207,172	N/A
California Department of Finance	211,632	207,403	206,184	206,579	205,928

Sources: United States Census Bureau. 2021. QuickFacts Butte County, California; Chico city, California. Website: https://www.census.gov/quickfacts/fact/table/buttecountycalifornia,chicocitycalifornia/PST045222#qf-flag-NA. Accessed October 4, 2024.
California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed December 13, 2024.

Population Forecasts

Approximately every 4 years, BCAG prepares a long-term regional growth forecast of housing, population, and employment for Butte County. BCAG prepared the Provisional Long-Term Regional Growth Forecasts 2022-2045 in 2023 (revised in April 2024), which provides population forecasts under low, medium, and high growth scenarios from 2022 through 2045. The growth forecasts presented in this forecast represent an update of the 2020–2045 Post Camp Fire Regional Growth Forecasts prepared in January 2021[5] and are intended to incorporate the latest estimates and projections from the State and impacts of the North Complex Fire.[6] The 2022–2045 Provisional Long-Term Regional Growth Forecasts medium growth scenario for the County are provided in Table 3.14-2.

Table 3.13-2: Butte County Population Forecast 2022–2045

Provisional Long-Term Regional Growth Forecasts 2022-2045 (Medium Scenario Benchmark)					
2022	2025	2030	2035	2040	2045
201,608	210,797	226,345	241,939	246,160	249,169

Source: Butte County Association of Governments (BCAG). 2024. Long-Term Regional Growth Forecasts 2022 – 2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft_v2.pdf. Accessed October 7, 2024.

City of Chico

Current Population Estimates

As of July 2023, the U.S. Census Bureau estimated that the City had a population of 101,301. This represents an approximately 0.82 percent decrease from the estimated 2020 population of 102,755.[7] According to DOF population estimates for 2024, the City had an estimated population of

[5] Butte County Association of Governments (BCAG). 2020. Post Camp Fire Regional Population and Transportation Study, Appendix A, Pre and Post Camp Fire Conditions and Regional Growth Forecast. Website: www.bcag.org/documents/Camp%20Fire/Post-Camp-Fire-Study-Appendix-A.pdf. October 6, 2024.

[6] Butte County Association of Governments (BCAG). 2024. Long-Term Regional Growth Forecasts 2022 – 2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft_v2.pdf. Accessed October 6, 2024.

[7] United States Census Bureau. 2024. City and Town Population Totals: 2020-2022, Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More, Ranked by July 1, 2022 Population: April 1, 2020 to July 1, 2022. Website: https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-cities-and-towns.html#v2022. Accessed October 4, 2024.

109,589, as of January 1, 2024.[8] Table 3.13-3 below provides population estimates for years 2020 through 2024 for the City.

Table 3.13-3: City of Chico Population Estimates 2020-2024

	2020	2021	2022	2023	2024
U.S. Census Bureau	102,755	100,508	101,758	101,301	N/A
California Department of Finance	101,776	103,016	105,517	107,639	109,589

Sources: United States Census Bureau. 2023. City and Town Population Totals: 2020–2023, Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More, Ranked by July 1, 2023 Population: April 1, 2020 to July 1, 2022. Website: https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-cities-and-towns.html. Accessed December 12, 2024.
California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020–2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 4, 2024.

Population Forecasts

As discussed above, BCAG prepared the Provisional Long-Term Regional Growth Forecasts 2022-2045 which provides population forecasts under low, medium, and high growth scenarios. The Provisional Long-Term Regional Growth Forecasts 2022-2045 includes projections at the City level. As noted previously, the growth forecasts presented in this forecast represent an update of the 2020–2045 Post Camp Fire Regional Growth Forecasts prepared in January 2021 and are intended to incorporate the latest estimates and projections from the State and impacts of the North Complex Fire. The 2022-2045 Provisional Long-Term Regional Growth Forecasts medium growth scenario for the City are provided in Table 3.13-4.

Table 3.13-4: City of Chico Population Forecast 2022-2045

Provisional Long-Term Regional Growth Forecasts 2022–2045 (Medium Scenario Benchmark)					
2022	2025	2030	2035	2040	2045
102,892	106,276	113,371	120,717	122,796	124,278

Source: Butte County Association of Governments. 2023. Long-term Regional Growth Forecasts 2022–2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed October 7, 2024.

Project Site

Current Population Estimates

The project site does not contain any residences. Therefore, on-site population is minimal and is limited to daytime use of the RV storage facility.

[8] California Department of Finance (DOF). 2023. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 6, 2024.

Housing

Existing Households and Household Size

According to DOF, there were an estimated 44,615 occupied households in the City in 2024 with an average household size of 2.38 persons per household, just slightly above the 2024 Countywide average of 2.30.[9]

Housing Units Forecasts and Future Housing Needs

As previously discussed, BCAG's Provisional Long-Term Regional Growth Forecasts 2022-2045 provides regional forecasts for housing.[10] Like the population forecasts detailed above, BCAG's housing forecasts have been revised and updated based on the Post Camp Fire Study. According to BCAG's housing unit forecast, the number of housing units in the City are expected to total 47,299 in 2025, 53,726 in 2035 and 55,311 in 2045.[11] According to the DOF, the City had an estimated total of 47,323 housing units in 2024, with a total of 44,615 occupied housing units.[12] The 2022-2045 Provisional Long-Term Regional Growth Forecast medium growth scenario for the City is provided in Table 3.13-5.

Table 3.13-5: City of Chico Housing Units Forecast 2022-2045

Provisional Long-Term Regional Growth Forecasts 2018–2040 (Medium Scenario Benchmark)					
2022	**2025**	**2030**	**2035**	**2040**	**2045**
45,793	47,299	50,457	53,726	54,652	55,311
Source: Butte County Association of Governments. 2023. Long-term Regional Growth Forecasts 2022–2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed October 7, 2024..					

Per the BCAG's 6th Cycle Regional Housing Needs Plan (RHNP), adopted December 2020, there is a need to build approximately 3,488 housing units at varying levels of affordability by 2030 in order to meet the housing needs of people at a range of income levels in the City. A breakdown of allocated units by income type is shown below in Table 3.13-6.

[9] California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 4, 2024.

[10] Butte County Association of Governments. 2023. Long-term Regional Growth Forecasts 2022–2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed October 7, 2024.

[11] Ibid.

[12] California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 4, 2024.

Table 3.13-6: City of Chico Housing Allocation 2021-2030

Income Category	Allocated Units	Percent of Allocation Total
Very Low Income (<50% of Area Median Income)	1,101	31.6
Low Income (51-80% of Area Median Income)	507	14.5
Moderate Income (81-120% of Area Median Income)	770	22.1
Above Moderate Income (>120% of Area Median Income)	1,110	31.8
Total	**3,488**	**100**

Source: Butte County Association of Governments (BCAG). 2020. 6th Cycle Regional Housing Needs Plan. Website: www.bcag.org/documents/planning/RHNP/2020%20RHNP/BCAG_6thCycleRHNP_11.30.20_FINAL.pdf. Accessed October 4, 2024

Employment

City of Chico

Current Employment Estimates

According to the California EDD, as of August 2024, the City contained a labor force of approximately 52,500 persons, with approximately 49,600 of those people employed. This represents an unemployment rate of 5.6 percent.[13]

Table 3.13.-1 identifies the employment assumptions identified by the General Plan for each land use designation proposed within the BYSP Area.

Table 3.13-7: General Plan Employment Assumptions (Average Square Foot per Employee)

General Plan Land Use Designation	Retail	Office	Industrial	Public
Residential Mixed Use (RMU)	500	275	0	0
Medium Density Residential (MDR)	0	0	0	0
Medium-High Density Residential (MHDR)	0	0	0	0
Primary Open Space (POS)	0	0	0	0
Secondary Open Space (SOS)	0	0	0	0

Sources:
City of Chico. 2011. General Plan–Appendix D. Website: https://chico.ca.us/documents/Departments/Community-Development/Planning-Division/General-Plan--Other-Planning-Documents/Chico-2030-General-Plan/appendix_d_land_use_projections.pdf. Accessed October 3, 2024.

[13] California Employment Development Department (EDD). 2024. Monthly Labor Force Data for Cities and Census Designated Places (CDP) August 2024 - Preliminary. Accessed October 4, 2024.

Countywide Jobs Forecasts

The BCAG's Provisional Long-term Regional Growth Forecasts 2022–2045 provides regional forecasts for employment. These employment forecasts have been revised as part of the Post Camp Fire Study. According to BCAG's Provisional Long-term Regional Growth Forecasts under the Medium Scenario, it is forecasted that there will be a total of 82,394 jobs in the County by 2025, 92,400 jobs by 2035, and 92,887 jobs by 2045.

Table 3.13-8: Butte County Employment Forecast 2022–2045

2025	2030	2035	2040	2045
82,394	88,497	92,400	92,888	92,887

Source: Butte County Association of Governments. 2023. Long-term Regional Growth Forecasts 2022–2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed October 7, 2024.

Project Site

Employment within the project site is limited to the existing RV storage facility, consisting of approximately one employee.

3.13.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to population and housing are applicable to this analysis.

State

California Housing Element Law

The State Housing Element Law (Government Code Chapter 1143, Article 10.6, §§ 65580 and 65589) requires each city and county to adopt a general plan for future growth. This plan must include a housing element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. The amount of housing that must be accounted for in a local housing element is determined through a process called the Regional Housing Needs Allocation (RHNA). In the RHNA process, the State gives each region a number representing the amount of housing needed, based on existing need, expected population growth, and related considerations.

At the State level, the California Department of Housing and Community Development (HCD) estimates the relative share of the State's anticipated population growth that would occur in each county in the State, based on DOF population projections and historic growth trends. Where there is a regional council of governments, as in this case with the Butte County Association of Governments (BCAG), HCD provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations. HCD oversees the process to ensure that the council of governments distributes its share of the State's projected housing need.

Each city and county must update its general plan housing element on a regular basis pursuant to the requirements of Government Code Section 65580, *et seq*. Among other things, the housing element must incorporate policies and identify potential sites that would accommodate a city's or county's share of the regional housing need. Before adopting an update to its housing element, a city or county must submit the draft to the HCD for review. The HCD will advise the local jurisdiction whether its housing element complies with the provisions of California Housing Element Law. As noted above, the regional councils of governments are required to assign regional housing shares to the cities and counties within their region on a similar schedule. At the beginning of each cycle, the HCD provides population projections to the regional councils of governments, who then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

Regional

Regional Housing Needs Plan

State Housing Element Law, Government Code Chapter 1143, Article 10.6, Sections 65580 and 65589, requires development of a Regional Housing Needs Plan (RHNP). The RHNP is based on Countywide housing projections developed by the HCD. A major goal of the RHNP is to assure fair distribution of housing among the cities and county. Housing allocation targets are not building requirements, but goals for each community to accommodate through appropriate planning policies and land use regulations.

Adopted in December 2020, the 6th Cycle RHNP Plan covers an eight and a half year planning period that is between December 31, 2021 to June 15, 2030 and assigns housing need allocations to the Cities of Biggs, Chico, Gridley, Oroville, the Town of Paradise, and Butte County. The RHNP includes housing unit allocation at four different income levels, including very low, low, moderate, and above-moderate. As determined by the RHNP, for this current cycle, the City's total RHNA allocation is 3,488 units.

Local

Chico 2030 General Plan

The General Plan sets forth the following goals, policies, and actions that are relevant to this analysis with respect to population, housing, and employment.

General Plan Housing Element

The City adopted its 2022-2030 Housing Element (Housing Element) in 2023, which serves as Chico's primary policy document regarding the development, rehabilitation, and preservation of housing for all economic segments of the population within its jurisdiction. The Housing Element identifies and analyzes existing and projected housing needs of Chico and states goals, policies, and actions for the preservation, improvement, and development of housing. The housing program describes strategies to produce, rehabilitate and conserve housing. Goals, policies, and actions that are relevant to this analysis are detailed below.

Goal 1 Improve fair housing choice and equitable access to opportunity.

Policy 1.1 Move toward more balanced and integrated living patterns by addressing disproportionate housing needs including displacement risk for renter households with overpayment (Census Tracts 1.02, 1.04, 5.01, 5.02, 6.03, 6.04, 10, 11, and 12), renter households with housing problems as defined by the U.S. Department of Housing and Urban Development, and households with overcrowding (Census Tract 13).

Policy 1.5 Move toward more balanced and integrated living patterns by addressing accessible housing needs for people with disabilities. In the City of Chico in 2019, an estimated 10-20 percent of the population has a disability in most of the census tracts within the city.

Action 1.8.3 As part of the Barber Yard Specific Plan, enhance recreational opportunities in the Southwest Chico neighborhood (Census Tract 12) by adding a variety of parks and recreation facilities. This may include, but is not limited to, a historic ballpark, dog park, pocket arks, and event and picnic table areas along with an indoor athletics facility. Approximately 4.5 acres of new public parks would be open to the general public as well as residents that live in the Barber/Southwest Chico neighborhood (Census Tract 12). The remaining parks and the athletics facility, approximately 10 acres, may require a fee or membership.

Goal 4 Promote construction of a wide range of housing types.

Policy 4.1 Enable sufficient housing construction to meet future needs.

Policy 4.2 Promote a mix of dwelling types and sizes throughout the City.

Goal 5 Encourage the creation of housing for persons with special needs, including youth, seniors, those with disabilities and those experiencing homelessness.

Policy 5.1 Assist in the provision of housing for youth, senior, people with disabilities, and those experiencing homelessness.

Goal 6 Improve, rehabilitate and revitalize existing homes and neighborhoods.

Policy 6.1 Maintain and enhance the character and affordable nature of Chico's older neighborhoods.

Action 6.1.1 Continue to support planning at the neighborhood scale by engaging with neighborhood groups as appropriate and reviewing developments for compatibility with adopted neighborhood plans.

Policy 6.4 Use the City's Code Enforcement Division to facilitate neighborhood improvements.

Goal 7 Increase home ownership.

Policy 7.1 Expand homeownership opportunities for first-time homebuyers.

Goal 9 Encourage energy efficiency in housing.

Policy 9.1 Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code and reduce long-term housing costs through planning and applying energy conservation measures.

General Plan Land Use Element

Goal LU-1 Reinforce the City's compact urban form, establish urban growth limits, and manage where and how growth and conservation will occur.

Policy LU-1.3 (Growth Plan)–Maintain balanced growth by encouraging infill development where City services are in place and allowing expansion into Special Planning Areas.

Goal LU-2 Maintain a land use plan that provides a mix and distribution of uses that meet the identified needs of the community.

Policy LU-2.1 (Planning for Future Housing and Jobs)–Maintain an adequate land supply to support projected housing and job needs for the community.

Goal LU-6 Comprehensively plan the Special Planning Areas to meet the City's housing and jobs needs.

Policy LU-6.1 (Special Planning Area Designation)–To meet the City's growth needs, support development in the following five Special Planning Areas:

- Bell Muir
- Barber Yard
- Doe Mill/Honey Run
- North Chico
- South Entler

Policy LU-6.2 (Special Planning Area Implementation)–Allow flexibility when planning the Special Planning Areas in order to meet changing community housing and job needs.

3.13.4 - Methodology

The proposed project was evaluated for potential impacts on population and housing resulting from implementation of the proposed project through, among other things, a review of applicable plans, policies, data, and site conditions. FirstCarbon Solutions (FCS) personnel reviewed relevant resources from the City, County, DOF, and the U.S. Census Bureau in conducting this analysis.

3.13.5 - Thresholds of Significance

The City, as the lead agency, has elected in its discretion to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to population and housing are significant environmental effects. Would the proposed project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (The proposed project would have no significant impacts related to this threshold; therefore, this criterion is addressed in Chapter 4, Effects Found not to be Significant).

3.13.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides feasible mitigation measures where appropriate.

Population Growth

Impact POP-1:	**The proposed project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

Impact Analysis

A significant impact would occur if development of the proposed project as contemplated under the Barber Yard Specific Plan (BYSP) would directly or indirectly induce substantial, unplanned population growth. As discussed in Chapter 2, Project Description, buildout of the proposed project could generate up to 1,250 dwelling units over its buildout period of approximately 18 years. Based on the average household size in the City of 2.38 persons per household, the proposed project would likely accommodate residents up to 2,975.[14] The BYSP also contemplates the adaptive reuse of approximately 150,000 square feet of existing structures for commercial uses, as well as an additional approximately 60,000 square feet of newly constructed commercial space. As mentioned above, the 2022-2045 Butte County Long-term Regional Growth Forecasts which accounts for the impact of the Camp Fire and COVID-19 on regional population projections. Therefore, the Butte County Long-term Regional Growth Forecasts provides the most up to date population forecasts currently available. The 2022-2045 Butte County Long-term Regional Growth Forecasts anticipates the City's population will increase to 124,278 persons by 2045. This represents an increase of 14,689 over the DOF 2024 estimates of 109,589. As such, the BYSP Area population potential of approximately 2,975 residents represent approximately 20.2 percent of the estimated growth for Chico over the next 20 years, well within the anticipated population growth for the City.[15]

[14] 1,250 x 2.38 = 2,975.5
[15] 2,975/14,689 = 20.25%

Accordingly, implementation of the proposed project would not exceed the City's anticipated population growth.

Implementation of the BYSP would provide employment opportunities as a result of the proposed approximately 210,000 square feet of new commercial uses that could be constructed as part of the proposed project over time. Such employment opportunities have the potential to result in population growth. As previously mentioned, revised BCAG job projections as part of the Post Camp Fire Study indicate that Countywide, job numbers are expected to increase to 97,075 by 2045. At buildout, the proposed project is anticipated to employ approximately 458 full-time employees. 16 Because the BYSP Area is included and analyzed as part of future buildout in the General Plan, upon which, in part, the BCAG job projections are based, the proposed project's potential increase in employment would be considered planned growth.

Buildout of the BYSP Area is planned for and anticipated within the General Plan and is consistent with citywide planning objectives. In addition, the General Plan Draft EIR concluded that the impact of General Plan buildout associated with population growth would be less than significant. Furthermore, the proposed project is consistent with the proposed uses envisioned under the SPA land use designation, which identifies areas to be developed with a mix of residential densities, employment opportunities, services, retail, parks, and open space. The Barber Yard SPA (SPA-2) conceptual land use plan identifies the general mix of land uses to be included in the final land plans. Land uses envisioned in the SPA-2 conceptual land use plan include a mix of residentially designated land, including low, medium, and high density residential, and residential mixed-use, with an overall average density of approximately 6 to 15 units per acre, as well as office, light industrial, and public uses. Conceptual land use plans included in the General Plan do not represent precise proportions or locations of future land uses. According to the General Plan, the Barber Yard SPA has a development potential of 1,096 dwelling units and 403,882 square feet of non-residential uses. The proposed project proposes a mix of land uses including Residential Mixed Use (RMU), Medium Density Residential (MDR), Medium-High Density Residential (MHDR), Primary Open Space (POS), and Secondary Open Space (SOS). As discussed above, the proposed project could generate a maximum of 1,250 dwelling units, pursuant to the residential unit cap set forth in the Specific Plan. Depending on the location within the BYSP Area, residential density would range from 4 to 35 units per gross acre. A total of approximately 210,000 square feet of commercial space is envisioned upon buildout. Overall, the proposed project would result in slightly more dwelling units but only half the envisioned commercial space. However, as noted, land uses identified by the General Plan for the Barber Yard SPA are conceptual only. As indicated herein, the proposed population and employment growth would be consistent with estimates. Therefore, growth resulting from the proposed project would be considered planned growth. As such, impacts from the planned population growth associated with development under the proposed project would be less than significant.

Level of Significance

Less than significant impact.

[16] Based on the assumptions of 166 employees for health/fitness club land use, 128 employees for retail plaza land use, and 164 employees for restaurant land use utilized in the traffic analysis

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.13.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis related to population, housing, and employment consists of the BYSP Area, the remaining lands within the City boundary as well as those lands within the City's Sphere of Influence (SOI), in combination with impacts from projected growth in unincorporated Butte County and the immediately adjacent surrounding region. Impacts from cumulative growth are considered in the context of their consistency with regional planning policies as these relate to population and employment forecasts. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, could result in a cumulatively significant impact to population and housing. This analysis then considers whether the incremental contribution of impacts associated with implementation of the proposed project would have a cumulatively considerable contribution on any identified cumulative significant impact. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

The general plans and other planning documents prepared by the jurisdictions within Butte County are required to develop land use plans that comply with State law and that would accommodate the existing and forecasted population. These planning documents are designed to account for future population growth and associated needs on a regional and cumulative scale. Consistent with State law, these planning documents are required to identify adequate land for housing to accommodate forecasted numbers of people within the jurisdiction, and displaced development, if any, would be replaced primarily within the jurisdiction. Further, new development, including the proposed project would be required to address potential environmental impacts as part of individual project review. As such, cumulative development would not induce substantial unplanned population growth, either directly or indirectly. Because cumulative projects would comply with all applicable land use plans to provide adequate development within a jurisdiction, cumulative impacts would be less than significant.

Moreover, the proposed project would not have a cumulatively considerable contribution to the less than significant cumulative impact. As described above, the proposed project would not induce a substantial amount of growth that has not been adequately planned for or require the construction of replacement housing elsewhere. As the projected population growth resulting from the proposed project is well within projected growth estimates, the proposed project's contribution to this less than significant cumulative impact would not be cumulatively considerable. Furthermore, while the proposed project would offer employment opportunities, this increase in employment would be considered planned growth because it is consistent with planned development and is within projected employment growth estimates. Furthermore, it is anticipated that these positions may, in part, be filled by the City's existing labor force, based on unemployment rates. The proposed project would not result in any policies or physical improvements that would result in direct or indirect

unplanned regional growth or result in substantial displacement of people or the need to construct additional housing to accommodate any such displacement (given that there are no existing residential uses within the project site) and therefore would not contribute to a cumulative impact. Therefore, the proposed project would not have a cumulatively considerable cumulative impact. Cumulative impacts would be less than significant.

Level of Cumulative Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

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3.14 - Public Services

3.14.1 - Introduction

This section describes the existing conditions related to public services in the City of Chico (City) on the project site and vicinity, as well as the relevant regulatory framework. This section also evaluates the potential impacts related to public services that could result from implementation of the proposed project. Descriptions and analysis in this section are based, in part, on relevant information provided by the Chico 2030 General Plan (General Plan), the City of Chico Municipal Code, the Chico Fire Department (CFD), the Chico Police Department (CPD), the Chico Unified School District (CUSD), the Chico Area Recreation and Park District (CARD), the Butte County Library, and the Barber Yard Specific Plan. The following public comments were received during the Notice of Preparation (NOP) scoping period related to public services and recreation.

- Questions regarding the cost of multiple pocket parks versus one larger park.
- Expresses concerns over whether the City's police and fire services are equipped to accommodate the proposed project.
- Recommends that all historic buildings within the project site be retrofitted with fire sprinklers.
- Requests that the proposed project not be fenced off or otherwise limit access to CARD parks within the project site.
- Requests that odd numbered streets feature bike and walking paths to encourage use of CARD parks.
- Expresses concerns over CARD's maintenance of new parks increasing taxes for residents.
- Expresses concerns that the proposed project, once developed, will increase use of existing parks.
- States that the public use of parks within the project site must be secured as part of the Barber Yard Specific Plan (BYSP).

3.14.2 - Environmental Setting

Fire Protection and Emergency Medical Services

The CFD provides fire protection and emergency medical services across a service area of 33 square miles, including the project site. Specifically, this service area includes the City of Chico as well as nearby unincorporated areas of Butte County (County) through the Chico Urban Area Fire and Rescue Agreement. The CFD is a full-service fire agency and provides fire suppression, aircraft rescue, firefighting, fire prevention, technical rescue, hazardous materials mitigation, first responder basic and advanced life support service.[1] A detailed description of CFD fire stations, staffing, apparatus, service standards, and response times are provided below.[2]

[1] Chico Fire Department. 2017. Strategic Plan 2016-2021. Website: https://chico.ca.us/documents/City-Services/Public-Safety/Fire-Department/Office-of-the-Chief/strategicplan-cfd2016-2021.pdf. Accessed March 29, 2024.
[2] City of Chico. 2023. Operations. Website: https://chico.ca.us/City-Services/Public-Safety/Fire-Department/Operations/index.html. Accessed March 29, 2024.

Fire Stations

The CFD operates out of four stations and is headquartered at Station 1, located at 842 Salem Street. A fifth fire station is unstaffed and located at the Chico Municipal Airport. In the event of an airport emergency, Firefighters respond from other stations. Station 1 is the nearest fire station to the BYSP Area, approximately 0.77 mile away. These stations are summarized in Table 3.14-1 below.

Table 3.14-1: Fire Station Summary

Station	Address	Distance to Project Site (approx.)	Apparatus and Staffing
Station 1 (Headquarters)	242 Salem Street	0.77 mile	Truck 1
Station 2	182 East 5th Avenue	1.8 miles	Engine 2, Rescue 2
Station 3	Chico Municipal Airport	5.92 miles	Crash Rescue 3 (unstaffed)
Station 4	2405 Notre Dame Boulevard	1.62 miles	Engine 4, OES 8332
Station 5	1777 Manzanita Avenue	3.32 miles	Engine 5, Engine 15, HazMat 5
Source: City of Chico. 2023. Fire Stations and Apparatus. Website: https://chico.ca.us/post/fire-stations-and-apparatus. Accessed March 29, 2024.			

Staffing and Apparatus

The CFD's four stations are staffed by firefighters 24 hours a day, 365 days a year. The CFD has approximately 60 full-time personnel, including approximately 57 uniformed personnel. The CFD also has eight Volunteer Firefighters.[3] The CFD's frontline apparatus consists of Truck 1 and Engines 2, 4, and 5. The number assigned to each apparatus corresponds to the Station at which the apparatus is located, as shown in Table 3.14-1 above.

In addition to the apparatus noted above, the CFD cross-staffs specialized equipment between stations. This equipment is detailed below:

- **Squad 1:** a rapid response vehicle for medical emergencies.
- **Engine 15 and Office of Emergency Services (OES) 8332:** Type-3 engines for fighting fires in the wildland interface that are routinely dispatched to vegetation fires.
- **Rescue 2:** designed for technical rescue incidents in the City and Upper Bidwell Park.
- **HazMat5:** carries specialized equipment for the Butte County Interagency HazMat Team.[4]

[3] City of Chico. 2023. Operations. Website: https://chico.ca.us/City-Services/Public-Safety/Fire-Department/Operations/index.html. Accessed March 29, 2024.

[4] City of Chico. 2023. Fire Station and Apparatus. Website: https://chico.ca.us/City-Services/Public-Safety/Fire-Department/Operations/Fire-Stations-and-Apparatus/index.html. Accessed March 29, 2024.

A Fire Prevention Division staffed with Fire Inspectors is led by the CFD Fire Chief and the Fire Marshal. The Fire Prevention Division provides fire protection engineering services, Fire Code Enforcement, and education programs.[5]

The CFD also has three department members who are on the Arson Task Force. The Arson Task Force is an interagency organization associated with the Butte County Fire Chiefs' Association which actively investigates the cause and origin of fires. The Arson Task Force includes representatives from all fire agencies within the County as well as law enforcement and the District Attorney's Office.[6]

Calls for Service and Response Times

In 2018 (the most recent available data) the CFD responded to approximately 12,700 incidents. Most of these incidents, approximately 73.34 percent were rescue and emergency medical service incidents.[7] As noted below, Action S-4.1.1 of the General Plan identifies a goal of an initial response time of 5 minutes 30 seconds or less for at least 90 percent of fire emergency response calls in urbanized areas. Between January and May of 2018, the CFD responded to incidents within 8 minutes and 20 seconds 90 percent of the time. Slower response times were attributed in part to the closures of two CFD stations: Station 3 and Station 6.[8] CFD Station 6, prior to its closure, was located in West Chico at 2544 Highway 32 and housed Engine 6 and an OES Engine.

The CFD maintains a mutual aid agreement with the California Department of Forestry and Fire Protection (CAL FIRE) and Butte County. Mutual aid deployments allow for the rapid mobilization of resources among local governments, regions, and the State to provide the resources necessary to mitigate large-scale emergencies.[9] The closure of CAL FIRE Station 41, located on State Route (SR) 99 northwest of the City, in 2017 was also a contributing factor in the slower response times reported by the CDF.[10]

Police Protection

The CPD provides police protection services to the City of Chico. If requested by the Butte County Sheriff's Office or the California Highway Patrol (CHP), the CPD may provide assistance in surrounding unincorporated areas on a case-by-case basis.[11] The CPD is headquartered at 1460 Humboldt Road. The CPD covers six patrol beats within City limits. The BYSP Area is located in Beat 3.[12]

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5 City of Chico. 2023. Operations. Website: https://chico.ca.us/City-Services/Public-Safety/Fire-Department/Operations/index.html. Accessed March 29, 2024.

6 City of Chico. 2023. Interagency Arson Task Force. Website: https://chico.ca.us/arson-task-force. Accessed March 29, 2024.

7 Chico Fire Department (CFD). 2019. City of Chico Fire Department, Breakdown by Major Incident Types for Date Range. Website: https://chico.ca.us/sites/main/files/file-attachments/000553-breakdownbymajorincidenttypesfordaterange.pdf. Accessed March 29, 2024.

8 Enterprise-Record. 2018. Chico Closes Two Fire Stations, Firefighter Layoffs Due Sunday. Website: https://www.chicoer.com/2017/03/07/chico-closes-two-fire-stations-firefighter-layoffs-due-sunday/. Accessed December 11, 2024.

9 City of Chico. 2011. Chico 2030 General Plan. Safety Element.

10 Butte County. Facilities. Fire Station 41. Website: https://www.buttecounty.net/Facilities/Facility/Details/Station-41-Nord-14. Accessed March 29, 2024.

11 City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report. Section 4.14 Public Services and Utilities.

12 City of Chico. 2024. Chico Police Department Beat Map. Website: https://www.arcgis.com/apps/mapviewer/index.html?webmap=4d7fdb86fd0d425abca9fa00d26c3b91. Accessed March 29, 2024.

Staffing

Currently, the CPD is allocated approximately 107 full-time sworn and approximately 65.5 non-sworn employees for a total of 172.5 full-time employees. However, as of 2022, the most recent data available, only approximately 144.5 full-time positions, including 94 sworn employees and 50.5 non-sworn employees, were filled. Patrol officers are deployed in two groups, Team A and Team B, each comprised of three shifts. The Patrol Division is authorized to be staffed with one Captain, four Lieutenants, seven Sergeants, 48 police officers, and seven community service officers to cover all six patrol beats across the City.[13]

The CPD also manages the Detective Bureau, Violence Suppression Unit, Traffic and Parking Services, School Resource Officers, Peer Support Team, Training Unit, Field Training Program, Crime Scene Investigation, Unmanned Aerial System, Major Accident Investigation Team, Crisis Negotiation Team, Special Weapons and Tactics (SWAT), Honor Guard, and a K9 Unit comprised of four K9 Teams assigned across the Patrol Division.[14]

Additionally, interagency teams including the Butte County Interagency Bomb Squad and the Butte Interagency Narcotics Task Force are staffed by multiple law enforcement agencies throughout the County. The CPD has one Sergeant and one Detective assigned to the Butte Interagency Narcotics Task Force.[15]

Calls for Service and Response Times

In 2022, which is the most recent data available, the CPD received approximately 46,961 calls for service.[16,17]

Schools

The CUSD provides public K-12 education services to the City and surrounding areas. CUSD encompasses approximately 322 square miles and oversees 12 Elementary Schools, three Junior High Schools (Middle Schools), two High Schools, one Community Day School, one Center for Alternative Learning, one Independent Study School, one Special Services School, one Online Learning Academy and four Preschool Programs.[18] The CUSD enrolled a total of approximately 12,088 students during the 2022-2023 school year.[19] The CUSD schools and programs are detailed in Table 3.14-2 below.

[13] Chico Police Department (CPD). 2022. Chico Police Department 2022 Annual Report. Website: https://chico.ca.us/documents/City-Services/Public-Safety/Police-Department/Chico-Police-Department-Annual-Report/2022_annual_report_final.pdf. Accessed March 29, 2024.

[14] Ibid.

[15] Ibid.

[16] Calls for service include all calls where a police officer is sent to a call and is physically present at the scene

[17] Chico Police Department (CPD). 2022. Chico Police Department 2022 Annual Report. Website: https://chico.ca.us/documents/City-Services/Public-Safety/Police-Department/Chico-Police-Department-Annual-Report/2022_annual_report_final.pdf. Accessed March 29, 2024.

[18] Chico Unified School District (CUSD). 2018. Our District. Website: www.chicousd.org/Our-District/index.html. Accessed March 29, 2024.

[19] California School DASHBOARD. 2023. Chico Unified. Website: https://www.caschooldashboard.org/reports/04614240000000/2021/schools. Accessed March 29, 2024.

Table 3.14-2: CUSD Schools Summary

Station	Type	Address	Distance to Project Site (approx.)	Enrollment (22-23) (approx.)	Target Capacity
Chapman Elementary School	Elementary School	1071 East 16th Street, Chico	0.88 mile	300	320
Citrus Elementary	Elementary School	1350 Citrus Avenue, Chico	1.54 miles	341	320
Emma Wilson Elementary	Elementary School	1530 West 8th Avenue, Chico	2.08 miles	565	672
Hooker Oak Elementary School	Elementary School	1238 Arbutus Avenue, Chico	1.68 miles	291	320
Little Chico Creek Elementary	Elementary School	2090 Amanda Way, Chico	1.87 miles	431	496
Marigold School	Elementary School	2446 Marigold Avenue, Chico	2.99 miles	570	672
McManus Elementary School	Elementary School	988 East Avenue, Chico	2.94 miles	415	672
Neal Dow Elementary School	Elementary School	1420 Neal Dow Avenue, Chico	2.03 miles	335	320
Parkview Elementary School	Elementary School	1770 East 8th Street, Chico	1.87 miles	406	470
Rosedale Elementary	Elementary School	100 Oak Street, Chico	0.84 mile	543	672
Shasta Elementary School	Elementary School	169 Leora Court, Chico	4.87 miles	647	496
Sierra View Elementary School	Elementary School	1598 Hooker Oak Avenue, Chico	2.44 miles	456	496
Bidwell Junior High School	Middle School	2376 North Avenue, Chico	2.64 miles	990	1,050
Center for Alternative Learning (CAL)	Middle School	290 East Avenue, Chico	3.03 miles	30	–
Chico Junior High School	Middle School	280 Memorial Way, Chico	1.05 miles	928	1,098
Marsh Junior High School	Middle School	2253 Humboldt Road, Chico	2.09 miles	732	1,011
Chico High School	High School	907 Esplanade, Chico	1.15 miles	1,906	2,095
Fair View High School	High School	290 East Avenue, Chico	3.03 miles	196	–

Station	Type	Address	Distance to Project Site (approx.)	Enrollment (22-23) (approx.)	Target Capacity
Pleasant Valley High School	High School	1475 East Avenue, Chico	2.83 miles	1,841	2,246
Academy for Change (AFC-Community Day)	Other	290 East Avenue, Chico	3.03 miles	16	–
Loma Vista (Special Services Program)	Other	1560 Manzanita Avenue, Chico	2.99 miles	14	–
Oak Bridge Academy (Online Learning)	Other	1350 East Lassen Avenue, Chico	3.89 miles	N/A	–
Oakdale (Independent Study)	Other	290 East Avenue, Chico	3.03 miles	607	–

The BYSP Area is within the attendance boundary for Chapman Elementary School, Chico Junior High School, and Chico High School.[20,21,22] According to the CUSD's 2022 School Fee Justification Study, the CUSD has the capacity to accommodate a total of approximately 12,931 students. This includes approximately 5,234 students at the elementary school level, 3,039 students at the junior high school level, 4,111 students at the high school level, and 547 students at alternative education facilities. Based on enrollment data from October 2021, the CUSD has available capacity for approximately 60 additional students at the elementary school level, 378 students at the junior high school level, and 489 students at the high school level.[23] All of the schools serving the BYSP Area have some amount of existing, available capacity, as indicated in the table above.

Additionally, the Chico Country Day School (CCDS) is a public charter school located approximately 0.33 mile north of the BYSP Area at 102 West 11th Street. The CCDS was founded in 1996 as a dependent charter school of the CUSD but became an independent 501(c)(3) corporation and charter school in 2004.[24] The CCDS had a total of approximately 572 students enrolled from kindergarten through Grade 8 during the 2020-2021 school year.[25] Other charter schools in the vicinity include Paradise Charter Middle School, Inspire School of Arts and Sciences, Nord Country

[20] Chico Unified School District (CUSD). 2018. Chapman Elementary School Attendance Boundary. Website: www.chicousd.org/documents/boundaries/2018/School%20Boundary/ES_Chapman.pdf. Accessed March 29, 2024.
[21] Chico Unified School District (CUSD). 2018. Junior High School Boundaries. Website: www.chicousd.org/documents/boundaries/2018/School%20Boundary/JHSB_Large_Format.pdf. Accessed March 29, 2024.
[22] Chico Unified School District (CUSD). 2018. High School Boundaries. Website: www.chicousd.org/documents/boundaries/2018/School%20Boundary/HSB_Large_Format.pdf. Accessed March 29, 2024.
[23] Chico Unified School District (CUSD). 2022. 2022 School Fee Justification Study. Website: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.chicousd.org/documents/Business%20Services/Developer%20Fee%20Studies/CUSD_FeeJustificationStudy_2022_FINAL_2022_03_30.pdf. Accessed April 1, 2024.
[24] Chico Country Day School. 2021. Who We Are. Website: https://www.chicocountryday.org/who-we-are/. Accessed March 29, 2024.
[25] California Department of Education. 2021. Chico Country Day Charter School 2021 School Accountability Report Card. Website: https://www.chicocountryday.org/wp-content/uploads/2021_School_Accountability_Report_Card_Chico_Country_Day_School.pdf. Accessed March 29, 2024.

School, Wildflower Open Classroom, CORE Butte Charter School, Achieve Charter School, Blue Oak Charter School, Pivot Charter School, and Sherwood Montessori.

Parks

As discussed in detail in Section 3.15, Recreation, park and recreation services for the greater Chico community (including the project site) are provided by the City and CARD. According to the General Plan, CARD, which is a separate legal entity, has historically been and continues to be responsible for recreational programming and community parks while the City has been and continues to responsible for Bidwell Park. CARD has acquired most existing neighborhood parks from the City and operates them, as well as community parks, pursuant to a Memorandum of Understanding mutually adopted by the agencies. Bidwell Park is an approximately 3,670-acre, 11-mile-long municipal park within the City. This park compromises a large portion of the northeastern section of the City and is one of the largest municipal parks in the United States.[26]

CARD adopted a Park and Recreation Master Plan (PRMP) in 2008, which was subsequently updated in 2018. Between CARD and the City, the 2018 PRMP Update identifies a total of 13 neighborhood parks and six community parks. A new park, Hartley Park, has opened since the 2018 PRMP Update was adopted. These existing park facilities are described below in Tables 3.14-3 and 3.14-4.

Table 3.14-3: Existing City and CARD Neighborhood Parks

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to BYSP Area (approx. miles)**
Oak Way Park	7.9	CARD	2.16
Peterson Park	4.1	CARD	3.73
Baroni Park	7.3[1]	CARD	2.42
Hancock Park	3.8	CARD	3.79
Emerson Park	1.44	City	1.98
Rotary Park[2]	0.3	CARD	0.19
Alamo/Henshaw	5.5[1]	CARD	3.23
Nob Hill/Husa Ranch Park	2.9	City	2.68
Depot Park	2	City	0.64
Children's Park	3.7	City	0.92
Rotary Centennial Park	5	CARD	3.30
Humboldt Windchime Park[3]	3	CARD	1.01
Caper Acres	3.5	City	1.26
Hartley Park	4.35	CARD	4.70

[26] City of Chico. 2022. About Bidwell Park. Website: https://chico.ca.us/Our-Community/Parks-Recreation-and-Experience-the-Outdoors/Bidwell-Park/. Accessed March 29, 2024.

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to BYSP Area (approx. miles)**
Notes: CARD = Chico Area Recreation and Park District [1] Undeveloped acreage totals approximately 7.6 acres. [2] Mini Park [3] City established this as passive Open Space Source: Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed November 2, 2022.			

Table 3.14-4: Existing City and CARD Community Parks

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to Plan Area (approx. miles)**
Community Park (E. 20th Street)	40	CARD	1.01
Hooker Oak Park[1]	35	CARD/City	3.37
Wildwood Park	30.30	CARD	3.40
Humboldt Skate Park	3.8	CARD	0.51
DeGarmo Park[2]	36	CARD	4.70
One-Mile Recreation Area	23	City	1.05
Notes: CARD = Chico Area Recreation and Park District [1] CARD leases the property from the City of Chico. [2] Undeveloped acreage totals approximately 14 acres. Source: Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.gov/five-year-master-plan. Accessed March 9, 2024.			

As shown in Table 3.14-3 and Table 3.14-4 above, Rotary Park, Depot Park, Children's Park, and the Humbolt Skate Park are all within approximately 1 mile of the project site. Rotary Park is the nearest to the project site, located approximately 0.19 mile north of the project site at 1532 Broadway Street. The approximately 0.30 acre Rotary Park features a basketball court, playground, swings and picnic tables.[27]

The General Plan directs that CARD's PRMP parkland standards of 1.5 acres of neighborhood parks per 1,000 people and 2.5 acres of community parks per 1,000 people be applied for future neighborhood and community parks. In addition, the City has a service standard of 2.5 acres of greenways[28] per 1,000 residents. As of 2018, CARD states that there are 0.36 acre of neighborhood parks per 1,000 people and 1.47 acres of community parks per 1,000 people, based only on park and

[27] Chico Area Recreation and Park District (CARD). 2023. Rotary Park. Website: https://www.chicorec.com/rotary-park. Accessed March 29, 2024.
[28] In the context of this analysis "greenway" is considered passive open space than adjoins a creek.

recreation facilities provided by CARD and the City and excluding Upper Bidwell Park and portions of Lower Bidwell Park.[29] Therefore, the current provision of neighborhood and community parks falls below the standard established in the 2008 PRMP (as updated in 2018).

Library Services

The Butte County Library system provides library services to Butte County, including the City. The Butte County Library system consists of six branch libraries and a literacy program. Residents in Biggs, Chico, Durham, Gridley, Oroville, and Paradise are served by the six branches of the Butte County Library system. The administrative offices are located at 1820 Mitchel Avenue in Oroville, California, at the Oroville Branch Library.[30]

The nearest library to the BYSP Area is the Chico Branch Library located at 1108 Sherman Avenue, approximately 1.71 miles north of the BYSP Area.[31]

3.14.3 - Regulatory Framework

State

California Building Code

The State of California provides a minimum standard for building design through the California Building Standards Code (CBC), which is in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the 1997 Uniform Building Code but has been modified for California conditions; it is considered to reflect some of the most stringent standards in the nation. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local, City, and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire-resistant standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Health and Safety Code

California Health and Safety Code, Sections 13100–13135, establish the following policies related to fire protection:

13100.1 The functions of the office of the State Fire Marshall, including CAL FIRE, shall be to foster, promote, and develop strategies to protect life and property against fire and panic.

[29] Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.gov/five-year-master-plan. Accessed March 29, 2024.

[30] Butte County. 2013. About The Library. Website: https://www.buttecounty.net/645/About-the-Library#:~:text=Originally%20established%20in%20the%20Butte,in%20the%20Oroville%20Branch%20Library. Accessed March 29, 2024.

[31] Butte County. 2013. Locations and Hours. Website: https://www.buttecounty.net/1663/Locations-Hours-and-Contacts. Accessed March 29, 2024.

13104.6 The Fire Marshall has the authority to require fire hazards to be removed in accordance with the law relating to removal or public nuisances on tax-deeded property.

California Fire Code

California Code of Regulations, Title 24, Part 9 (California Fire Code), incorporates adoption of the 2015 International Fire Code of the International Code Council with necessary California amendments, which is revised and published every three years by the California Building Standards Commission. This is the official Fire Code for the State and all political subdivisions. The California Fire Code and Office of the State Fire Marshal provides regulations and guidance for local agencies in the development and enforcement of fire safety standards. The California Fire Code also establishes minimum requirements that would provide a reasonable degree of safety from fire, panic, and explosion. The California Fire Code applies to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure within the State of California. The California Fire Code includes a mandate for automatic sprinkler systems in new buildings and structures, including floors of buildings where the fire area exceeds 5,000 square feet, has an occupant load of 100 or more, or is located on a floor other than the level of exit discharge (California Code of Regulations [CCR] Title 24 Part 9).

California Senate Bill 50

California Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation under CEQA of school facilities impacts as a condition of approving new development and provides instead for the imposition of a standardized developer fee, which constitutes full mitigation of any and all such impacts. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding, and whether the school district meets certain additional criteria involving bonding capacity, year-round school, and the percentage of movable classrooms in use.

SB 50 added the following language to Government Code Section 65996:

(b) The provisions of this chapter are hereby deemed to provide full and complete school facilities mitigation and, notwithstanding Section 65858, or Division 13 (commencing with Section 21000) of the Public Resources Code, or any other provision of state or local law, a state or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property or any change in governmental organization or reorganization, as defined in Section 56021 or 56073, on the basis that school facilities are inadequate.

(c) For purposes of this section, "school facilities" means any school-related consideration relating to a school district's ability to accommodate enrollment.

(d) Nothing in this chapter shall be interpreted to limit or prohibit the ability of a local agency to utilize other methods to provide school facilities if these methods are not levied or imposed in connection with, or made a condition of, a legislative or adjudicative act, or

both, involving, but not limited to, the planning, use, or development of real property or a change in governmental organization or reorganization, as defined in Section 56021 or 56073. Nothing in this chapter shall be interpreted to limit or prohibit the assessment or reassessment of property in conjunction with ad valorum taxes, or the placement of a parcel on the secured roll in conjunction with qualified special taxes as that term is used in Section 50079.

California Government Code, Section 65995(b) and Education Code, Section 17620

SB 50 amended Section 65995 of the California Government Code, which contains limitations on Section 17620 of the Education Code, the statute that authorizes school districts to assess development fees within school district boundaries. Section 65995(b)(3) of the Government Code requires the maximum square footage assessment for development to be increased every 2 years according to inflation adjustments. As of June 21, 2023, school impact fees for Chico Unified School District were $4.79 per square foot of assessable space for residential development of 500 square feet or more, and $0.78 per square foot of chargeable covered and enclosed space for commercial/industrial development. School districts may levy higher fees if they apply to the State and meet certain conditions.

Quimby Act

The Quimby Act of 1975 authorizes local governments to establish ordinances requiring residential subdivisions to provide land for park and recreation purposes or pay in lieu of fees for such purposes. The Quimby Act sets a standard park space to population ratio of 3 acres of parkland per 1,000 residents. Cities with a ratio of higher than 3 acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development. The calculation of a city's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of city-owned parkland.

Mitigation Fee Act

The Mitigation Fee Act requires any local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied.

Local

City of Chico

General Plan

The Chico 2030 General Plan establishes the following goals and policies relevant to public services:

Safety Element

Policy S-4.1 **(Fire Safety Staffing)** Maintain adequate fire suppression and prevention staffing levels.

Action S-4.1.1 **(Fire Response Time)** Strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency response calls in urbanized areas.

Policy S-4.2 **(Interagency Coordination)** Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.

Policy S-4.3 **(Fire Safety Standards and Programs)** Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.

Policy S-4.4 **(Vegetation Management)** Support vegetation management and weed abatement programs that reduce fire hazards.

Goal S-5 **Provide a safe, secure environment with responsive police services for the community.**

Policy S-5.1 **(Police Services)** Continue to provide fundamental police services based upon rapid response to emergencies and response, control and intervention in conduct that threatens life and property.

Action S-5.1.2 **(Police Staffing**): Maintain adequate staffing to meet the needs of the community's service population.

Action S-5.1.3 **(Response time)**: Analyze and monitor factors affecting police response times, and make operational adjustments as necessary in order to provide the most expeditious responses.

Policy S-5.5 **(Design to Deter Crime)** Support the deterrence of crime through site planning and community design.

Parks, Public Facilities, and Services Element

Goal PPFS-1 Continue cooperative efforts with the Chico Area Recreation and Park District and the Chico Unified School District to provide a broad range of high quality parks and recreation facilities and services for all residents.

Policy PPFS-1.1 **(Park and Recreation Facilities):** Partner with CARD and local providers to provide parks and recreation facilities that offer recreation opportunities for the community.

Action PPFS-1.1.2 **(Park Development Fees**): Adopt park development fees that support the goals of the CARD Parks and Recreation Master Plan to fund the acquisition and development of neighborhood and community parks, and community use facilities, such as an aquatic park, needed as a result of new development.

Action PPFS-1.1.3 **(Cooperative Development of Facilities**): Pursue cooperative development of neighborhood, community, and regional parks, as well as facilities that enhance recreational opportunities and economic development, such as sports and aquatic complexes, with the Chico Area Recreation and Parks District.

Action PPFS-1.1.5 **(CARD Review of City Projects**): Solicit comments from Chico Area Recreation and Parks District staff as part of early project review for Special Planning Areas and larger subdivision proposals.

Goal PPFS-3 **Support efforts by Chico Unified School District, CSU Chico, Butte College and private educational institutions to maintain and improve educational facilities and services in the City.**

Policy PPFS-3.1 **(CUSD Coordination)** Support Chico Unified School District's efforts to provide school sites and facilities that meet the educational needs of the community.

Action PPFS-3.1.2 **(Plan for School Sites)** Consult with Chico Unified School District staff when planning the Special Planning Areas to ensure that school facilities are in place to meet the needs of development.

Chico Municipal Code

Chapter 2.20 establishes the fire department, including its function and organization. Functions include protecting life and property through prevention and elimination of fire hazards, enforcing laws related to the preventing and extinguishing of fires and handling of potentially dangerous combustibles and explosives, investigation of criminal-related fires, recruiting and training of personnel, and any other duties as directed by the City Manager.

Chapter 16.42 contains the general provisions of fire regulations to safeguard life and property from the hazards of fire and explosion, including conduction of inspections and issuance of permits.

Chapter 16R.42 establishes fire regulation standards, governing the improvement, alteration, occupation or maintenance of any premises, and the regulation of non-building standards activities in all structures, facilities, premises, and occupancies for the prevention of fire and/or for the protection of life and property against fire.

Chapter 2.28 establishes the police department, including its function and organization. This chapter mandates that all police officers must adhere to standards established by the California Commission on Peace Officer Standards and Training.

Chapter 12.04 includes the general provision of City parks and playgrounds, including Bidwell Park, Children's Playground, Depot Park, and Plaza Park.

Impact Fees

Chapter 3.85, Article VI, of the Chico Municipal Code (Municipal Code) requires new development to pay a Building and Equipment Fee, which contributes to fire and police protection buildings and

equipment, thereby mitigating the impacts on fire protection facilities. Tables 3.14-5 and 3.14-6 detail the development impact fee schedule for fire and police protection.

Table 3.14-5: Fire Protection Building and Equipment Fee Schedule

Development	Fee
Residential	**(per dwelling unit)**
Single-Family	$455.00
Multi Family	$455.00
Commercial	**(per square foot)**
Retail	$0.84
Office	$0.75
Industrial	$0.01
Source: City of Chico. 2022. 22/23 Master Fee Schedule. Website: https://chico.ca.us/documents/Government/Resources/City-Budget/fee_schedule_for_publication_23-24.pdf. Accessed April 2, 2024.	

Table 3.14-6: Police Protection Building and Equipment Fee Schedule

Development	Fee
Residential	**(per dwelling unit)**
Single-Family	$520.00
Multi Family	$520.00
Commercial	**(per square foot)**
Retail	$2.56
Office	$0.28
Industrial	$0.03
Source: City of Chico. 2022. 22/23 Master Fee Schedule. Website: https://chico.ca.us/documents/Government/Resources/City-Budget/fee_schedule_for_publication_23-24.pdf. Accessed April 2, 2024.	

Municipal Code Chapter 3.85, Article V, Park Facility Fees, requires each new residential property to pay a Park Facility Fee and a Bidwell Park Land Acquisition Fee, as detailed below in Table 3.14-7, in order to mitigate the impacts on park facilities caused by future development in the City.

Table 3.14-7: Park Facility Fee Schedule

Development	Fee per Dwelling Unit
Park Facility Fees	
Residential (Single-Family)	$5,439.00
Residential (Multi Family)	$5,439.00
Commercial and Industrial	No Fee
Bidwell Park Land Acquisition Fee	
Residential (Single-Family)	$77.00
Residential (Multi Family)	$77.00
Commercial and Industrial	No Fee
Source: City of Chico. 2022. 22/23 Master Fee Schedule. Website: https://chico.ca.us/documents/Government/Resources/City-Budget/fee_schedule_for_publication_23-24.pdf. Accessed April 2, 2024.	

Chico Unified School District

The CUSD imposes School Impact Fees on new residential and commercial or industrial construction located within the service boundaries of the district pursuant to Government Code Section 65995 and Education Code Section 17620. The 2023 School Impact Fee rates are detailed below in Table 3.14-8.

Table 3.14-8: School Impact Fee Schedule

Development	Fee per Square Foot
Residential	$4.79
Commercial (other than Rental Self Storage)	$0.78
Self Storage	$0.18
Source: Chico Unified School District (CUSD). 2024. School Impact Fees. Website: https://www.chicousd.org/Departments/Business-Services/Quick-Reference/School-Impact-Fees/index.html. Accessed April 3, 2024.	

CARD Park and Recreation Master Plan

The purpose of the 2018 CARD Master Plan Update is to review and update the recommendations of the 2008 CARD Master Plan given the current and future park and recreation needs within the CARD service area. The 2018 CARD Master Plan Update acts as a roadmap for park and recreation facility improvements, new facilities, expanded programs, and new recreation opportunities for the community. Specifically, the 2018 CARD Master Plan Update contains a detailed inventory of all existing parklands and current Level of Service (LOS), identifies existing gaps in service and current park and recreation needs, and identifies future park and recreation facilities needs and

redevelopment areas. Consistent with the General Plan, the 2018 CARD Master Plan Update establishes a parkland standard of 1.5 acres of neighborhood parks per 1,000 people and 2.5 acres of community park per 1,000 people.[32]

3.14.4 - Methodology

This analysis identifies potential impacts associated with the construction of new or expanded public facilities that would be triggered by the proposed project in order to adhere to any relevant performance standards/response times/service ratios with respect to fire protection, police protection, schools, libraries, and parks facilities based on development anticipated from the proposed project. Impacts to public services were assessed using the significance criteria established by the California Environmental Quality Act (CEQA) Guidelines, as well as applicable provisions of State and local plans, regulations, and ordinances, as indicated herein.

3.14.5 - Thresholds of Significance

The City, as lead agency, in its discretion has decided to utilize the criteria in the CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to public services resulting from the implementation of the proposed project, which would be considered significant if it would:

> . . . result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new, or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
>
> a) Fire protection?
> b) Police protection?
> c) Schools?
> d) Parks?
> e) Other public facilities?

3.14.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides feasible mitigation measures where appropriate.

Fire Protection

Impact PUB-1:	**The proposed project would not result in substantial adverse physical impacts associated with the provisions of new or expanded fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.**

[32] Chico Area Recreation and Park District. 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.gov/five-year-master-plan. Accessed March 29, 2024.

Impact Analysis

The project site is within the CFD service area and thus is currently served with fire protection and emergency medical services provided by the CFD. As detailed more fully in Section 2, Project Description, of this Draft EIR, the proposed project is anticipated to develop a maximum of 1,250 dwelling units and 210,000 square feet of commercial uses along with recreational/open space uses and related improvements. This increase in housing is expected to result in a maximum population increase of approximately 2,975 persons, based on a ratio of 2.38 person per household reported by California Department of Finance (DOF).[33,34]As such, implementation of the proposed project would result in an increased demand for fire protection services. Though the proposed project would likely increase calls for fire protection and emergency medical services to a certain extent given the increase in residential and non-residential population, because the project site is within an urbanized environment and is currently within the CFD service area with an existing fire station approximately ¾ mile away, it is not anticipated that it would require the need for new or expanded facilities. Fire Station 1 is the nearest fire station to the BYSP, approximately 0.77 mile away, and would serve the proposed project. Using an average travel speed of 25 miles per hour, it would take an engine responding from Station 1 to the project site 2 minutes and 24 seconds once dispatched. This is below the CFD's goal response time of 5 minutes and 30 seconds established by General Plan Action S-4.1.1. Other stations would be expected to serve the proposed project in the event that Station 1 is already on a call, which could affect response times.

Moreover, the proposed project would be required to comply with applicable provisions of the City's Fire Regulation Standards as detailed in Chapter 16R.42 of the Municipal Code, including the then-applicable California Fire Code. Furthermore, the City's Division of Community Risk Reduction performs fire prevention services that the proposed project would be subject to during the subsequent application process for individual development proposals, such as

- Fire Code permit inspections;
- the provision of fire input in the development review process;
- the provision of fire input in the use permit process;
- fire service input to required fire suppression system planning and installation; and
- fire service supervision of fire alarm system planning, installation, and testing, among other services.[35]

The foregoing would help to ensure that each specific individual development proposal follows standards for fire safety such as fire flow requirements for buildings, fire hydrant location and distribution criteria, automated sprinkler systems, and fire-resistant building materials.

The proposed project would also be required to comply with applicable provisions of Municipal Code Section 3.85.605, requiring new development to pay a Building and Equipment Fee, which includes a

[33] California Department of Finance (DOF). 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 4, 2024.

[34] 1,250 (dwelling units) x 2.38 (person per household) = 2,975 new residents.

[35] City of Chico. 2020. Fire Prevention and Life Safety. Website: https://chico.ca.us/City-Services/Public-Safety/Fire-Department/Fire-Prevention--Life-Safety/index.html. Accessed March 29, 2024.

Fire Protection Building And Equipment Fee, in order to mitigate the impacts on fire protection facilities. The CFD, in its discretion, utilizes the Fire Protection Building and Equipment Fee collected from various developers over time to help fund the construction of new, or additions to existing, fire stations, and other fire protection buildings as well the acquisition of fire protection equipment at such time as the CFD determines appropriate consistent with its capital improvement program.[36] For the reasons noted above, no such new or expanded improvements would be triggered by the proposed project; at such time as the CFD sought to pursue such improvements as part of its overall capital improvement plan, then the same would be subject to compliance with CEQA as part of a separate environmental review process.

The proposed project's payment of the applicable development impact fees, as detailed in Table 3.14-2, would ensure payment of its pro rata share of any fire facility improvements consistent with the purpose of impact fees; i.e., "for development to pay its own way".

Furthermore, primary vehicular access to the BYSP Area would be provided by the extension of West 16th Street and Ivy Street. The extension of West 14th Street, West 18th Street, and West 20th Street, as well as a new connection to Estes Road, would also provide off-site roadway connections to facilitate efficient and effective overall circulation. Circulation within the BYSP Area would be provided via a network of framework streets. Details of the street network within the BYSP Area would be designed to facilitate emergency response access requirements pursuant to the Fire Code and otherwise, and would be reviewed by the Traffic Division and the CFD with the filing of each tentative subdivision map.

For these reasons, the proposed project would not result in significant adverse effects related to fire protection services and impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Police Protection

Impact PUB-2:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.**

[36] City of Chico. 2023. City of Chico Municipal Code, Chapter 3.85, Article VI, Section 3.85.605 Disposition of building and equipment fee revenues.

Impact Analysis

As discussed previously, the project site is within the CPD service area and thus is already served with police protection services provided by the CPD. The CPD covers six patrol beats within the city limits and the BYSP Area is located in Beat 3. As detailed more fully in Section 2, Project Description, of this Draft EIR, the proposed project is anticipated to develop a maximum of 1,250 dwelling units and 210,000 square feet of commercial uses along with recreational/open space uses and related improvements. This increase in housing is expected to result in a population increase of approximately 2,975 persons. In addition, as discussed in Section 03-13 Population and Housing, some nominal indirect growth in connection with the proposed commercial uses would also occur. As such, implementation of the proposed project would result in increased demand for police protection services.

Though the proposed project would likely increase calls for service to a certain extent given the increase in residential and non-residential population, because the project site is within an urbanized environment and is currently within the CPD service area and based on the CFP's assessment of its staffing and facilities capabilities, it is not anticipated that the proposed project would trigger the need for new or expanded facilities. The CPD provided a written response dated June 20, 2023 that indicated that implementation of the proposed project would not require the construction of new or expanded police protection facilities. According to correspondence with the CPD, the department averages a ratio of officers to citizens of 1.09 officers per 1,000 citizens, and had an average response time of 27.77 minutes between April 2022 and April 2023.[37] Additionally, as detailed in correspondence with the CPD, new or expanded facilities would not be needed due to the proposed project specifically, but rather the need for any such facilities would be triggered to keep pace with planned City population growth and the implementation of the General Plan more generally. Because the need for additional staffing and/or facilities already exists, the proposed project itself would not create an additional need for new or expanded police protection facilities.

Moreover, while the BYSP does not include specific policies related to police protection, it does include various provisions designed to enhance community safety. For example, a fence will be installed between the Union Pacific Rail Line and the BYSP Area, and the planned transportation network within the BYSP Area prioritizes safety. Additionally, the proposed project would feature sufficient security and accent lighting along streets and pedestrian pathways. Such lighting would also be included within commercial and residential developments within the BYSP Area.

As discussed previously, the proposed project would also be required to comply with applicable provisions of Municipal Code Section 3.85.605, which requires new development to pay a Building and Equipment Fee, which includes a Police Protection Building and Equipment Fee, in order to mitigate the impacts on police protection facilities. The CPD, in its discretion, utilizes the Police Protection Building And Equipment Fee collected from various developers over time to help fund the construction of new, or additions to existing, police stations, and other police buildings as well the acquisition of police protection equipment at such time as the CFP determines appropriate

[37] Email correspondence with Jeramie Struthers, Chico Police Department (CPD). June 20, 2023.

consistent with its capital improvement program.[38] For the reasons noted above, no such new or expanded improvements would be triggered by the proposed project; at such time as the CPD sought to pursue such improvements as part of its overall capital improvement plan, then the same would be subject to compliance with CEQA as part of a separate environmental review process.

Therefore, the proposed project's payment of the applicable development impact fees, as detailed in Table 3.14-3, would ensure payment of its pro rata share of any police facility improvements consistent with the purpose of impact fees; i.e., "for development to pay its own way".

Therefore, the proposed project would not result in significant adverse effects related to police services and impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Schools

Impact PUB-3:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools.**

Impact Analysis

As discussed previously, the project site is within the CUSD service area. As detailed more fully in Section 2, Project Description, of this Draft EIR, the proposed project is anticipated to develop a maximum of 1,250 dwelling units. Based on an average household size of 2.37 persons per household, provided by the California Department of Finance, this increase in housing is anticipated to generate approximately 2,975 persons. In addition, as discussed in Section 03-13 Population and Housing, indirect growth in connection with the proposed commercial uses would also occur, although given the nature of school services, student generation associated with such non-residential uses would be nominal at most. This would create an increase in demand for school services.

The CUSD provides student generation rates for each school level (elementary school, junior high school, and high school) based on residential unit type. Because the proposed project would offer a range of housing types, for the purposes of this analysis, the student generation rate for single-family detached units (which is the highest generation rate) was selected to provide a conservative

[38] City of Chico. 2023. City of Chico Municipal Code, Chapter 3.85, Article VI, Section 3.85.605 Disposition of building and equipment fee revenues.

estimate. Single-family detached units have a student generation rate of 0.147 elementary school students, 0.055 junior high school students, and 0.083 high school students per dwelling unit.[39] Based on these student generation rates, the proposed project at full buildout is anticipated to generate a total of approximately 185 elementary school students, 69 junior high school students, and 104 high school students for a total of 358 students.

As discussed previously, school services would be provided to the proposed project by the CUSD and area charter schools. The BYSP Area is within the attendance boundaries of Chapman Elementary School, Chico Junior High School, and Chico High School. Chico County Day Charter School is the closest school to the project site, located approximately 0.33 mile to the north.

Based on available information, as detailed above, the CUSD is able to accommodate an additional 935 students district wide. This includes a total of 68 elementary school students, 378 junior high school students and 489 high school students. As such, the CUSD has sufficient capacity to accommodate the increase in junior high and high school students anticipated as a result of the proposed project from a district-wide perspective. Specifically with respect to Chico Junior and Chico High School, as indicated above, there is sufficient capacity for the proposed project's students within these facilities.

The anticipated 185 elementary school students anticipated to be generated by the proposed project would, however, exceed CUSD's existing capacity. Although the proposed project is anticipated to generate elementary school students in excess of available capacity of the CUSD on a district-wide basis as well as exceed the current capacity of Chapman Elementary School specifically, this type of capacity issue is often faced with school districts throughout the state, where accommodations need to be made. For example, here, in addition to the traditional elementary schools within the district, there are 10 charter schools which serve the Chico community and could accommodate a portion of students associated with the proposed project.

CUSD provided a written response dated June 22, 2023 that indicated that the proposed project would not require new or expanded school facilities. As described above, the proposed project is nearest to and most likely to affect Chapman Elementary School, Rosedale Elementary School, Chico Junior High School, and Chico High School, and each have the capacity to accommodate the increased enrollments associated with the proposed project. According to correspondence with CUSD, the 2023 residential development fee imposed by the CUSD is $4.49 per square foot, and the commercial development fee is $0.78/square-foot.[40]

The proposed project would pay the applicable CUSD School Impact Fees pursuant to Government Code Section 65995 and Education Code Section 17620, which is used to help fund adequate school facilities for students generated as a result of new development over time. The CUSD, in its discretion and in coordination with other relevant public agencies, utilizes the School Impact Fees collected from various developers over time to help fund the construction of new, or additions to existing, school facilities at such time as the district and other relevant public agencies determine appropriate consistent with the capital improvement program and other state funding

[39] Chico Unified School District. 2022. 2022 School Fee Justification Study. March 30.
[40] Email correspondence with Julia Kristle, Chico Unified School District (CUSD). June 22, 2023.

considerations.[41] For the reasons noted above, no such new or expanded improvements would be triggered by the proposed project; at such time as the CUSD sought to pursue such improvements as part of its overall capital improvement plan and master facilities planning efforts, then the same would be subject to compliance with CEQA as part of a separate environmental review process.

Pursuant to Government Code Section 65995, payment of adopted development fees is considered "full and complete mitigation" for impacts to school facilities, and local governments are prohibited from assessing additional fees or exactions for school impacts. Accordingly, the developer of each specific individual development proposal would be required to pay any and all applicable fees at the time building permits are sought. Therefore, the proposed project would not trigger the need for new or expanded school facilities. Thus, the proposed project would not result in significant adverse effects related to school facilities and impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Parks

Impact PUB-4:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks.**

Impact Analysis

As discussed in detail above as well as Section 3.15, Recreation, of this Draft EIR, park and recreation services for the greater Chico community are provided by the City and CARD. The 2030 General Plan directs use of CARD's PRMP parkland standards of 1.5 acres of neighborhood parks per 1,000 people and 2.5 acres of community park per 1,000 people for future neighborhood and community parks. In addition, the City has a service standard of 2.5 acres of greenways per 1,000 residents. According to the 2018 PRMP update, the amount of existing neighborhood and community parks falls below the standard established in the 2008 PRMP.

As detailed more fully in Section 2, Project Description, of this Draft EIR, the proposed project is anticipated to develop a maximum of 1,250 dwelling units, which would generate a total of approximately 2,975 persons. In addition, as discussed in Section 03-13, Population and Housing,

[41] City of Chico. 2023. City of Chico Municipal Code, Chapter 3.85, Article VI, Section 3.85.605 Disposition of building and equipment fee revenues.

some nominal indirect growth in connection with the proposed commercial uses would also occur. This would create an increase in demand for parks.

CARD provided a written response dated June 29, 2023, indicating that it is poised to accommodate the increased demand generated by the proposed project through increased staffing proportionate to the added park resources and funding for maintenance and capital asset replacement. Nevertheless, CARD's response also states that the nearest neighborhood park to the project site, located approximately 0.3 miles away, is currently overburdened by the surrounding neighborhood due it its small size. Additional development without additional park space would significantly overwhelm the existing neighborhood park resources.[42]

As noted above, implementation of the proposed project's residential uses are anticipated to result in a population increase of a total of approximately 2,975 persons. According to City and CARD standards of 1.5 park acres of neighborhood parkland and 2.5 acres of community parkland per 1,000 residents, this increase in population would require a total of approximately 4.45 acres of neighborhood parks and approximately 7.41 acres of community parks.

The proposed project contemplates providing a total of approximately 15.8 acres of future private and public park, recreation, and open space amenities. This includes approximately 4.7 acres of neighborhood park land, which would meet the minimum LOS standard for neighborhood parks established by CARD and the City within its boundaries. The development agreement will contain criteria for the timely delivery of neighborhood parks commensurate with project buildout, as determined appropriate by the City Council. Potential environmental impacts that could occur as a result of the construction of these additional park, recreation and open space amenities have been fully evaluated as part of the proposed project throughout this Draft EIR. Accordingly, the proposed project would adhere to the applicable standard for neighborhood parks.

With regard to community parks, the Chico General Plan acknowledges that the City is currently underserved in terms of meeting the standard contained in the PRMP and notes that one or two additional community parks will be needed to accommodate the City's total anticipated service area population by the year 2030. This is consistent with the nature of community parks, which are relatively large in size and intended to serve the broader community. Accordingly, payment of applicable park fees to the City/CARD for their use to develop the one or two planned community parks over time is the typical means of satisfying the community park standard set forth in the City's General Plan and PRMP. This is the case for purposes of the proposed project as well.

Based on available information, the City/CARD are contemplating future development of a community park in the southern part of Chico as part of the capital improvement plan and implementation of the PRMP would be funded with development impact fees pursuant to the Quimby Act and the City's Park Ordinance set forth in its Municipal Code for parks that the City collects in conjunction with building permits for new residential units over time. Impact fees assessed for parks are based on estimates of future development of park sites, including the

[42] Email correspondence from Annabel Grimm, Chico Area Recreation and Park District (CARD). Dated June 29, 2023.

associated environmental review. The development impact fee program is established to ensure that adequate fees amounts are collected for these future community-serving projects.

Payment of development impact fees, including community park fees, will be required in conjunction with building permits for new development within the proposed project. Possible exceptions may be provided by the development agreement (e.g., given the shortage of neighborhood parks in the area, the City, in coordination with CARD, may incentivize the early delivery of completed neighborhood parks within the project by converting reimbursement obligations into park fee credits). The general park fees collected will subsequently be used for the development of new community parks over time, in the City/CARD's discretion, as part of their implementation of the capital improvement program and the PRMP.

Therefore, the proposed project would add to an existing need for development of a community park in the area and would be required to pay its fair share as development occurs toward the anticipated costs of acquisition and development of the new park, for which the City/CARD in their discretion may elect to pursue in the future.

Private park space and other amenities that are constructed and operated as part of the proposed project would be maintained by a Community Maintenance District or similar acceptable financing district/mechanism. Proposed parks and related recreational and open space amenities included in the BYSP Area are displayed in Exhibit 2-5. Since the proposed project includes sufficient neighborhood parkland to serve its future residents, a substantial amount of private parkland and amenities, and will pay its fair share toward development of additional community parkland in accordance with the City's General Plan, capital improvement programing goals, and the PRMP, the proposed project would have a less than significant impact on park facilities.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Other Public Facilities

Impact PUB-5:	**The proposed project would not result in substantial adverse physical impacts associated with the provision of new or expanded library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities (i.e., library facilities).**

Impact Analysis

There are no libraries located within the project site. However, as noted above, the proposed project would have access to existing nearby library services from the Chico Branch Library of the Butte County Library, located approximately 1.71 miles north of the project site.

As described in Section 3.13, Population and Housing, the proposed project could result in a population increase of up to 2,975 residents, and some nominal indirect growth in connection with the proposed commercial uses would also occur. As such, there would be a corresponding increase in demand for library facilities.

Though the proposed project would likely increase calls for library facilities to a certain extent given the increase in residential and non-residential population, because the project site is within an urbanized environment and is currently within the relevant service area and given the current capacities available from the existing facilities, it is not anticipated that the proposed project would require the need for new or expanded ones. Moreover, the proposed project would be required to pay the applicable Library Facilities and Equipment Fees as required by the Butte County Municipal Code Article XVII. The County, in its role as operating and managing the Butte County community's library system, in its discretion, utilizes this fee collected from various developers over time to help fund the cost of acquiring, developing, or improving library facilities to meet increasing demands for library services that occurs in connection with planned population growth throughout the County. For the reasons noted above, no such new or expanded improvements would be triggered by the proposed project; at such time as the Butte County Library system sought to pursue such improvements as part of its overall capital improvement plan, then the same would be subject to compliance with CEQA as part of a separate environmental review process.

For this reason, the proposed project would have a less than significant impact on library services.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.14.7 - Cumulative Impacts

The geographic scope for the analysis of cumulative impacts related to public services generally includes the BYSP Area, the rest of the City, and any other communities served by CFD and CPD as well as the school districts, parks, and libraries that would be utilized by residents, employees, and visitors of the proposed project. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, could result in a cumulatively significant impact to public services. This analysis then considers whether the incremental contribution of

impacts associated with implementation of the proposed project would be significant. Both conditions must apply for a project's cumulative effects to rise to the level of significance.

Fire Protection Facilities

The geographic scope for the analysis of cumulative impacts related to fire protection facilities and emergency medical services consists of the CFD service area. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of CFD to adequately serve their service area, thereby requiring construction of new facilities or modification of existing facilities that could result in significant environmental impacts. The proposed project, combined with other cumulative development, would result in an increase in demand for fire protection and emergency services. However, the proposed project, as well as other cumulative projects within the CFD service area, would take place in an already-urbanized area for the most part with ready access to fire protection facilities that are well established in the Chico community. Moreover, it is reasonable to assume that the CFD would regularly review the needs of its users within its service area and plan accordingly from a capital improvement as well as operation and maintenance perspective, and that such master planning efforts would help to ensure sufficient availability of fire protection and emergency services for the growth in population associated with the proposed project, as well as other cumulative development. In addition, consistent with applicable policies and plans, it is reasonable to assume that the CFD would identify whether and to what extent a specific proposal would trigger the need for additional staffing and/or facilities. Cumulative projects would similarly be required to comply with the Municipal Code, Building Code, Fire Code and General Plan policies and actions, including, among other things, adherence to all applicable Fire Code standards and requirements as well as payment of the applicable Fire Protection Building And Equipment Fee, which would provide funding over time for adequate fire equipment, vehicles, and facilities to meet the broad range of needs of Chico residents and employees, and any new or expanded facilities that are built in connection therewith would be required to obtain the necessary approvals and complete any required environmental review pursuant to CEQA. The foregoing would ensure there would be less than significant cumulative impacts in this regard. Moreover, the foregoing would further ensure that the proposed project, which would be located in close proximity to existing fire station(s) and would be required to adhere to expansive Fire Code safety standards and related requirements, would not have a cumulatively considerable contribution to this already less than significant cumulative impacts.

Police Protection Facilities

The geographic context for the analysis of cumulative impacts related to police protection facilities consists of the CPD service area. A significant cumulative environmental impact would result if this cumulative growth exceeded the ability of the CPD to adequately serve their service area, thereby requiring construction of new facilities or modification of existing facilities that could result in significant environmental impacts. The proposed project, combined with other cumulative development, would result in an increase in demand for police protection services. However, the proposed project, as well as other cumulative projects within the CPD service area, would take place in an already-urbanized area for the most part with ready access to fire protection facilities that are well established in the Chico community. Moreover, it is reasonable to assume that the CPD would regularly review the needs of its users within its service area and plan accordingly from a capital

improvement as well as operation and maintenance perspective and that such master planning efforts would help to ensure sufficient availability of police protection services for the growth in population associated with the proposed project, as well as other cumulative development. In addition, consistent with applicable policies and plans, it is reasonable to assume that the CPD would identify whether and to what extent a specific proposal would trigger the need for additional staffing and/or facilities. Cumulative projects would similarly be required to comply with the Municipal Code, other City ordinances, and General Plan policies and actions that address police protection services, including payment of a Police Protection Building and Equipment Fee to provide funding over time for the provision of adequate police equipment, vehicles, and facilities to meet the broad range of needs of Chico residents and employees, and any new or expanded facilities that are built in connection therewith would be required to obtain the necessary approvals and complete any required environmental review pursuant to CEQA. The foregoing would ensure there would be less than significant cumulative impacts in this regard. Moreover, the foregoing would further ensure that the proposed project, which would be located in close proximity to existing police station(s) and would incorporate a number of site planning features to enhance security and safety, would not have a cumulatively considerable contribution to this already less than significant cumulative impacts.

Therefore, cumulative impacts would be less than significant.

School Facilities

The geographic context for the analysis of cumulative impacts related to school facilities includes the CUSD and the schools that would serve the proposed project and surrounding communities. The proposed project, combined with other regional growth resulting from past, present, and reasonably foreseeable projects, would result in increased demand for additional school facilities within the CUSD. Schools are expected to receive mandated statutory development impact fees from the proposed project, as well as other cumulative development. The payment of School Impact Fees, per SB 50, constitutes full and complete mitigation and would enable the district to ensure that school facilities can accommodate students. Therefore, cumulative impacts would be less than significant.

Moreover, the proposed project's incremental contribution to the less than significant cumulative impacts would not be significant. As discussed under Impact PUB-3, development facilitated by the proposed project would be required to pay the applicable then-current School Impact Fees imposed by the CUSD on new residential and commercial construction, and compliance with this requirement ensures the impacts of the proposed project on school facilities would not have a cumulatively considerable contribution to this already less than significant cumulative impact

Park Facilities

The geographic context for the analysis of cumulative impacts of park facilities includes the City and the CARD service area. A significant cumulative environmental impact would result if cumulative growth resulted in an increase in the use of existing parks and recreational facilities, such that substantial physical deterioration of the parks or recreational facilities would occur or be accelerated to require the construction of new parks and recreational facilities or modification of existing parks and recreational facilities that could result in significant environmental impacts. The proposed

project, combined with other cumulative development, would result in an increase in demand for park facilities. However, the proposed project, as well as other cumulative projects within the City/CARD service areas, would take place in an already-urbanized area for the most part, with ready access to fire protection facilities that are well established in the Chico community. Moreover, it is reasonable to assume that the City/CARD would regularly review the needs of its users within its service area and plan accordingly from a capital improvement as well as operation and maintenance perspective as is reflected in the General Plan and PRMP and that such master planning efforts would help to ensure sufficient availability of park facilities for the growth in population associated with the proposed project, as well as other cumulative development. Cumulative projects would similarly be required to comply with applicable provisions of the Municipal Code, the State Quimby Act, other City ordinances, and the General Plan, such as providing park facilities, donating parkland, and/or paying applicable park facilities fees to facilitate achievement of adequate parkland ratios. Any new or expanded facilities built in connection therewith would be required to obtain the necessary approvals and complete any required environmental review pursuant to CEQA. The foregoing would ensure there would be less than significant cumulative impacts in this regard.

Moreover, the foregoing would further ensure that the proposed project, which would be located in proximity to existing park facilities, would incorporate substantial amounts of park, recreational, and open space amenities, would be obligated to pay applicable park fees, would have a less than significant impact.

Based on the foregoing, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact.

Library Facilities

The geographic context for analysis of cumulative impacts to other public facilities, such as libraries, consists of the Chico Branch Library service area and the broader Butte County Library service area. A significant cumulative environmental impact would result if cumulative growth exceeded the ability of the Chico Branch Library/County Library System to adequately serve people within their service areas, thereby requiring construction of new library facilities or modification of existing library facilities that could result in significant environmental impacts. The proposed project, combined with other cumulative development, would result in an increase in demand for library facilities. However, the proposed project, as well as other cumulative projects within the City/CARD service areas, would take place in an already-urbanized area for the most part, with ready access to library facilities that are well established in the Chico community. Moreover, it is reasonable to assume that the City/CARD would regularly review the needs of its users within its service area and plan accordingly from a capital improvement as well as operation and maintenance perspective and that such master planning efforts would help to ensure sufficient availability of library facilities for the growth in population associated with the proposed project, as well as other cumulative development. Cumulative projects would similarly be required to comply with applicable provisions of the County Code and related ordinances and other policies that address library facilities, including the payment of Library Facilities and Equipment Fees. Any new or expanded facilities that are built in connection therewith would be required to obtain the necessary approvals and complete any

required environmental review pursuant to CEQA. The foregoing would ensure there would be less than significant cumulative impacts in this regard.

Moreover, the foregoing would further ensure that the proposed project, which would be located in close proximity to existing library facilities and would also pay the applicable Library Facilities and Equipment Fees, would have a less than significant impact on library facilities.

Based on the foregoing, the proposed project would not have a cumulatively considerable contribution to this already less than significant cumulative impact.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

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3.15 - Recreation

3.15.1 - Introduction

This section describes existing parks and recreational facilities in the region and project vicinity as well as the relevant regulatory framework. This section also evaluates the potential impacts related to parks and recreational facilities that could result from the implementation of the proposed project. Information in this section is based, in part, on information obtained from the Chico 2030 General Plan (General Plan), the 2008 Park and Recreation Master Plan (PRMP), the 2018 PRMP Update, and the Barber Yard Specific Plan (BYSP).

No public comments were received during the Notice of Preparation (NOP) scoping period related to the environmental impact of the construction or operation of park and recreational facilities.

3.15.2 - Environmental Setting

City of Chico

Existing Parks and Recreational Facilities

Park and recreation facilities and services in the City are provided by the City and the Chico Area Recreation and Park District (CARD), which provides recreation opportunities to the greater Chico community. The CARD service area encompasses approximately 225 square miles and extends generally north to south from the Butte-Tehama County line to the intersection of Dayton Road and Chico Street and west to east from Muir Avenue to approximately the eastern side of Upper Bidwell Park.[1] According to the General Plan, the City has historically been responsible for Bidwell Park and neighborhood parks, while CARD has been responsible for recreational programming and community parks. Over recent years, however, the City has transferred ownership and management of most of the neighborhood parks to CARD.

The PRMP was adopted by CARD in 2008. Various standards and service ratios have been adopted for parks as set forth in the PRMP. The Level of Service (LOS) standard for neighborhood and community parks are as follows:

- Neighborhood Parks: These parks are intended to serve residents of the neighborhoods surrounding the park. These parks generally have 5 to 10 acres of usable areas, while Mini Parks are 1 to 2 acres in size. Mini Parks are intended to service higher density areas and areas with mixed-use housing. The desired LOS is 1.5 acres per 1,000 people.
- Community Parks: These parks are large, multi-purpose parks that provide active play opportunities and venues for organized recreational programs for the entire community. The desired LOS is 2.5 acres per 1,000 people.[2]

[1] Chico Area Recreation and Park District (CARD). 2024. Mission and Services. Website: https://www.chicorec.com/mission-and-services. Accessed December 10, 2024.
[2] City of Chico. 2011. Chico 2030 General Plan. Parks, Public Facilities, and Services.

The 2018 PRMP Update identifies a total of 13 existing neighborhood parks and six community parks between CARD and the City.[3] A new public park, Hartley Park, has opened since the 2018 PRMP Update was adopted. All existing parks are described in Table 3.15-1 and Table 3.15-2 below.

Table 3.15-1: Neighborhood Parks

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to BYSP Area (approx. miles)**
Oak Way Park	7.9	CARD	2.16
Peterson Park	4.1	CARD	3.73
Baroni Park	7.3	CARD	2.42
Hancock Park	3.8	CARD	3.79
Emerson Park	1.44	City	1.98
Rotary Park	0.3	CARD	0.19
Nob Hill/Husa Ranch Park	2.9	City	2.68
Depot Park	2	City	0.64
Children's Park	3.7	City	0.92
Rotary Centennial Park	5	CARD	3.30
Humboldt Road Site[3]	3	CARD	1.01
Caper Acres	3.5	City	1.26
Hartley Park	4.35	CARD	4.70

Notes:
BYSP = Barber Yard Specific Plan
CARD = Chico Area Recreation and Park District
Source: Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed June 5, 2023.

Table 3.15-2: Community Parks

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to BYSP Area (approx. miles)**
Community Park	40	CARD	1.01
Hooker Oak Park	35	CARD/City	3.37
Wildwood Park	30.30	CARD	3.40
Humboldt Skate Park	3.8	CARD	0.51

[3] Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed December 10, 2024.

Existing Parks and Facilities			
Park	**Acreage (approx.)**	**Managing Entity**	**Distance to BYSP Area (approx. miles)**
DeGarmo Park	36	CARD	4.70
One Mile Recreation Area	23	City	1.05

Notes:
BYSP = Barber Yard Specific Plan
CARD = Chico Area Recreation and Park District
Source(s): Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed June 5, 2023.

Bidwell Park

Bidwell Park is an approximately 3,670-acre municipal park within the City. The park is nearly 11 miles in length, comprising a large portion of the northeastern section of the City, and is one of the largest municipal parks in the United States. Bidwell Park is bisected by Manzanita Avenue, with the area to the west referred to as Lower Park and the area to the east referred to as Middle and Upper Park. Upper Park extends into the foothills of the Sierra Nevada Mountains, while Middle and Lower Park are primarily flat and level.[4] The western edge of Lower Park is approximately 1.01 miles north of the BYSP Area. Bidwell Park offers amenities such as hiking and biking trails, swimming, and golfing.[5]

Other Parks, Natural Areas, Corridors and Greenways

Other City-owned and maintained parks and recreation areas include City Plaza and Five Mile Recreation Area. City Plaza is an approximately 1.5-acre park located in downtown Chico featuring picnic tables, chess tables, a water play fountain, benches, a performing arts band shell, and restrooms. Five Mile Recreation Area is located within Middle Bidwell Park, in the northeastern area of the City, and features hiking and horse trails, creek access, walking paths, benches and picnic spaces.[6]

Additionally, the City owns and maintains natural areas, corridors, and greenways. These properties mostly remain undeveloped, without formal recreational elements, but are open to public access and sometimes contain walking paths. These properties include, but are not limited to:

- Verbena Fields
- Lindo Channel Greenway (portions)
- Lost Park
- Little Chico Creek Greenway (portions)

[4] City of Chico. 2022. About Bidwell Park. Website: https://chico.ca.us/Our-Community/Parks-Recreation-and-Experience-the-Outdoors/Bidwell-Park/About-Bidwell-Park/index.html#:~:text=Bidwell%20Park%20was%20established%20July,in%20Upper%20Park%20in%201995. Accessed December 10, 2024.

[5] Explore Butte County. 2022. Bidwell Park. Website: https://www.explorebuttecounty.com/places/bidwell-park. Accessed December 10, 2024.

[6] Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed December 10, 2024.

- Mud/Sycamore Creek (portions)
- Comanche Creek Greenway (portions)
- South Deadhorse Slough (portions)
- Teichert Ponds[7,8]

Chico Area Recreation and Park District Community Centers

CARD operates five community centers ranging in size and function. These facilities and their respective distances from the BYSP Area are detailed below.

- CARD Community Center: approx. 1.05 miles north
- Lakeside Pavilion: approx. 2.95 miles northeast
- Pleasant Valley Recreation Pool and Recreation Center: approx. 2.63 miles north
- Dorothy F. Johnson Center: approx. 0.69 mile north
- Chico Creek Nature Center: approx. 2.22 miles northeast

Chico Unified School District Properties

CARD and Chico Unified School District (CUSD) utilize each other's facilities to meet the needs of both agencies and to jointly serve the Chico community. CARD utilizes a number of school facilities for youth and adult sports as well as after school programs. CUSD uses parks and community centers for school sports programming, physical education classes, and other school meetings and events. There is a joint use agreement between the two agencies for the use of the Marsh Junior High Gymnasium. This agreement provides for 20 hours of recreation programming per week at this facility.[9]

Future Needs

Parkland Dedication Standard

The 2030 General Plan directs use of CARD's PRMP parkland standards of 1.5 acres of neighborhood parks per 1,000 people and 2.5 acres of community park per 1,000 people for future neighborhood and community parks. Through these standards, it is the intention of the City and CARD that most residents would be within a convenient walking distance of a neighborhood or community park and have access to open space and greenways.[10]

According to the 2018 PRMP Update, only park and recreation facilities provided by CARD and the City were considered in calculating the existing LOS for each park classification, excluding Upper Bidwell Park and portions of Lower Bidwell Park. As of 2018, CARD states that there is 0.36 acre of neighborhood parks per 1,000 people and 1.47 acres of community parks per 1,000 people.

[7] Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed December 10, 2024.

[8] City of Chico Public Works Department – Parks Division. 2021. Vegetative Fuels Management Plan for Parks, Greenways, Preserves and Open Spaces. Website: https://chico.ca.us/documents/Community/Parks--Outdoors/Park-Documents/Vegetative-Fuels-Management-Plan/final_vfmp_april_2021.pdf. Accessed December 10, 2024.

[9] Ibid.

[10] City of Chico. 2011. Chico 2030 General Plan. Parks, Public Facilities, and Services.

Therefore, the current LOS for neighborhood and community parks falls below the standard established in the 2008 PRMP.[11]

Project Site

Existing Parks and Recreational Facilities

Historically, the Diamond Match Factory site within the BYSP Area featured a private swimming pool, Fairburn Hall (a community social hall), a baseball diamond, tennis courts, and other recreational facilities serving the employees of the Diamond Match Company residing in Barber Neighborhood. These uses were discontinued on or before the Diamond Match Factory ceased operations in 1976. In its existing state, the BYSP Area consists mainly of abandoned structures and roadways and contains an existing RV storage facility. The off-site improvement area to the south of the BYSP Area is largely cleared and undeveloped. There are no existing park or recreation facilities within the BYSP Area or the off-site improvement area.

3.15.3 - Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to parks and recreation are applicable to this analysis.

State

Quimby Act

The Quimby Act (California Government Code § 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the State. The Quimby Act allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in lieu fee, or provide a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than 3 acres per 1,000 residents, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision based on the current ratio of parkland per 1,000 residents. If the existing amount of parkland in a community is less than 3 acres per 1,000 residents, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision.

The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan to adopt a parkland dedication or fee ordinance.

It should be noted that the Quimby Act applies only to the acquisition of new parkland; it does not apply to the physical development of new park facilities or associated operations and maintenance costs. Therefore, the Quimby Act effectively preserves open space needed to develop park and recreation facilities, but it does not ensure the development of the land or the provision of park and recreation services to residents. In addition, the Quimby Act applies only to residential subdivisions.

[11] Chico Area Recreation and Park District (CARD). 2018. Park and Recreation 2018 Master Plan Update. Website: https://www.chicorec.com/april-2019-master-plan-update. Accessed December 10, 2024.

Nonresidential projects could contribute to the demand for park and recreation facilities without providing land or funding for such facilities. Quimby Act fees are collected by the local agency (park district, city, or county) in which the new residential development is located.

Local

Chico 2030 General Plan

The General Plan sets forth the following goals, policies, and actions that are relevant to park and recreation resources and this analysis.

Parks, Public Facilities, and Services

Goal PPFS-1 Continue cooperative efforts with the Chico Area Recreation and Park District and the Chico Unified School District to provide a broad range of high quality parks and recreation facilities and services for all residents.

Policy PPFS-1.1 **Park and Recreation Facilities**–Partner with CARD and local providers to provide parks and recreation facilities that offer recreation opportunities for the community.

Action PPFS-1.1.3 **Cooperative Development of Facilities**–Pursue cooperative development of neighborhood, community, and regional parks, as well as facilities that enhance recreational opportunities and economic development, such as sports and aquatic complexes, with the Chico Area Recreation and Parks District.

Goal PPFS-2 Utilize creeks, greenways and preserves as a framework for a system of open space.

CARD Park and Recreation Master Plan 2018 Update

The 2018 PRMP sets forth the following goals and associated objectives that are relevant to park and recreation resources and this analysis.

Goal 1 **Provide a wide range of recreation and leisure opportunities for all residents of the Chico Area Recreation and Park District**

Objectives

- Promote a balanced system of different parks, specialized recreation facilities, and varied recreational programming.
- Design parks to provide for a variety of experiences that appeal to a broad range of interests, abilities, and ages.
- Provide 1.5 acres of neighborhood parklands and 2.5 acres of community parklands for every 1,000 residents.
- Develop new facilities and services, as well as upgrade existing facilities.
- Ensure that future demands are met through the development of new facilities and services.
- Provide accessible facilities and rehabilitate existing facilities to meet the requirements of the Americans with Disabilities Act (ADA).

Goal 2 **Equitably distribute and conveniently locate parks and recreation facilities and trails throughout CARD, the City of Chico, and Butte County within the Chico Urban Area.**

Objectives

- When possible, locate neighborhood parks within one-half mile of the neighbors they are intended to serve, and in locations that are comfortably and safely accessible by pedestrians and bicyclists.
- Develop additional lands, including joint school-park facilities, as adequately sized neighborhood parks in existing underserved neighborhoods. Where additional land is not feasible, provide safe and convenient pedestrian and bicyclist access to the nearest neighborhood park through construction of sidewalks, improved crossings of roadways, trails, and grade separated crossings of barriers, where feasible.
- Locate parks conveniently accessible to neighborhoods and in areas with good pedestrian or trail access.
- Locate mini parks where larger parks or adequately sized, undeveloped land is not available.
- Retain community parks, generally within one or two miles of residential areas, and on sites that are accessible by trails, bike lanes, and major roadways.
- Appropriately locate recreation centers, community centers, and other facilities that are heavily used by youth, adults, and seniors on sites with visual and vehicular access from major roadways, with public transit access, and with direct trail connections.
- Locate multi-purpose practice fields for youth sports in neighborhood parks, as well as community parks. Size neighborhood parks, minimum of 5 usable acres, to adequately allow for such uses.

Goal 3 **Develop and maintain parks and recreation facilities at a high level of quality that is appropriate for the location, the type of use, and nature of the facility.**

Objectives

- When possible, only accept land from developers with proper soil types that are of an adequate size and topography for suitable park development. Exceptions should be determined on a case-by-case basis.
- Where appropriate, incorporate historic or cultural resources into park designs to celebrate the unique aspects of the community of Chio and provide distinctiveness between parks.
- Manage fields for safe use and to prevent overuse and damage to playing surfaces.
- Select durable materials that are sustainable, resource efficient, and nontoxic for construction of facilities.

Goal 4 **Develop and maintain parks and recreation facilities in an environmentally sensitive manner.**

Objectives:

- Where appropriate, place greater emphasis on the use of non-irrigated landscapes native species, and low water requiring plant materials.
- Where possible, avoid environmentally sensitive areas when locating developed facilities.
- Protect water quality through implementation of "Best Management Practices" in the design of storm water conveyance and detention facilities.
- Use permeable pavements, recycled materials, locally manufactured products, locally available materials, and low energy-requiring facilities and technologies to the greatest extent possible.
- Provide for integrated pest management where/when possible.

Goal 5 **Provide adequate land acquisition, development, operations, and maintenance funding sources and tools to realize the master plan vision.**

Objectives:

- Ensure that new residential development provides the needed funding for parks and recreation facilities to the extent allowed by State law.

3.15.4 - Methodology

Impacts related to parks and recreational facilities were determined by first evaluating the proposed project's effect on existing park and recreational facility usage levels. Then, the analysis assesses whether project-related population increases could affect achievement of the General Plan Open Space and Conservation Element parkland standard and/or could result in substantial physical deterioration of existing facilities such that there would be a need to construct or expand parks and recreational facilities in a manner that would result in environmental impacts.

3.15.5 - Thresholds of Significance

Recreation

The City, as the lead agency, has determined in its discretion to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts to recreation are significant environmental effects. Would the proposed project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

3.15.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides feasible mitigation measures where appropriate.

Increase Use of Parks

Impact REC-1: **The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

Impact Analysis

The City and CARD provide, operate, and maintain various parks, trails, and community facilities throughout the City. There are no existing parks or recreational facilities within the BYSP Area.

As discussed in Section 3.13, Population and Housing, the addition of up to 1,250 new residential units could accommodate a total of approximately 2,975 new residents. Implementation of the BYSP would also provide additional employment opportunities as a result of the approximately 210,000 square feet of proposed new commercial uses that would be constructed as part of the proposed project over time. This anticipated increase in population and employment opportunities would increase demand for parks and recreational facilities. According to City and CARD park service standards, the increase in residential population would require approximately 4.46 acres of neighborhood parks and approximately 7.44 acres of community parks.[12] The BYSP Area's network of open spaces is designed to provide a wide array of active and passive recreational opportunities to meet the range of needs within the community and the region. Table 3.15-3 below details the park and recreation amenities proposed as part of the proposed project at full buildout.

Table 3.15-3: Proposed Parks and Amenities

Element	Description	CARD/City Obligation (approx. acres)	Private Ownership[1] Open Space (approx. acres)	Private Ownership Amenities (approx. acres)	Total (approx. acres)
Barber Pop-Up	If the BYSP Social Hub area is developed, then as the first phase of activation, a "Pop-Up," could involve temporary food, retail, and similar uses. The Pop-Up would be a transitional use in the area that would eventually be developed as Diamond Plaza.	N/A	N/A	N/A	**N/A**
The Diamond at Barber Yard	If development of this feature is pursued, it is envisioned to be built on the same ground as the Diamond Match Company's baseball field and	N/A	2.40	N/A	**2.40**

[12] 1.5 acres * (2,975/1,000) = 4.462 acres of neighborhood parks, 2.5 acres * (2,975/1,000) = 7.4375 acres of community parks.

Element	Description	CARD/City Obligation (approx. acres)	Private Ownership[1] Open Space (approx. acres)	Private Ownership Amenities (approx. acres)	Total (approx. acres)
	could involve an expandable field to support new recreational and entertainment uses.				
Engineering Building	If adaptive reuse of the Diamond Match Factory Engineering Building is pursued (approx. 17,200 square feet), it is assumed that it would serve as a flexible social gathering and commerce space.	N/A	N/A	1.10	**1.10**
Diamond Plaza	The open, central Diamond Plaza has been designed as a flexible event space for all occasions, hosting small-scale live music, outdoor movies, craft fairs, and pop-up food events. It would also function as a central meeting place, serving all the businesses and residents in the neighborhood.	N/A	1.37	N/A	**1.37**
The Square	This recessed free play area (including bocce courts) would create places for social gatherings, events, music, or smaller parties. The sunken plaza would be surrounded by seating and include areas to support mixed-use activity and provide spectator views into the Diamond Plaza. Various new and existing surfaces are anticipated to include turf, decomposed granite, existing concrete slabs and blocks, and repurposed crushed materials from the BYSP Area.	N/A	1.05	N/A	**1.05**
Athletics Facility	If adaptive reuse of the Louisiana Pacific-era warehouse (approximately 130,000 square feet) at the north end of the BYSP Area is pursued, it could be designed, for example, as an indoor-outdoor athletics facility, with multi-use fields, an indoor court, and fitness concepts, among other amenities.	N/A	N/A	5.00	**5.00**
Dog Park	This feature is assumed to be located near the Social Hub and would serve BYSP Area residents and visitors with large and small dogs ,providing an	1.04	N/A	N/A	**1.04**

Element	Description	CARD/City Obligation (approx. acres)	Private Ownership[1] Open Space (approx. acres)	Private Ownership Amenities (approx. acres)	Total (approx. acres)
	outdoor area for play and off-leash training.				
Picnic Grove Park	This feature is assumed to be located adjacent to residences and would act as a recreational opportunity for project residents and guests. Inclusive play structures and picnic/barbeque areas are contemplated to be located throughout, as appropriate.	1.86	N/A	N/A	**1.86**
Ruins Park	This feature is assumed to be located on the foundation ruins of the Apiary building from the Diamond Match Factory era and would serve as a unique passive outdoor amenity featuring an elevated platform for events and ceremonies or day-to-day passive recreational use.	0.80	N/A	N/A	**0.80**
The Yard (Pocket Parks)	Embedded in residential areas throughout the BYSP Area, this type of pocket park would offer active recreational opportunities aimed at families and young children. Inclusive play structures and picnic areas are contemplated to be located in these types of parks.	1.00	N/A	N/A	**1.00**
The Shop	This structure, along with the Engineering Building, the Diamond and the Diamond Plaza, would make up the Social Hub. The Social Hub would provide opportunities for a community-scaled amenity featuring commercial, recreational, and entertainment uses. The Shop by itself is not considered a recreational amenity.	N/A	N/A	0.16	**0.16**
BYSP Area Total:		**4.70**	**4.82**	**6.26**	**15.78**

Notes:
[1] As indicated in the Barber Yard Specific Plan, these facilities would be under private ownership and would be maintained via funds from the property owners association and community facilities district fees.
Source: Barber Yard Specific Plan.

As shown in the above table, the proposed project would provide a total of approximately 15.8 acres of park, recreational, and open space amenities. It is anticipated that CARD would be responsible for operating and maintaining the Dog Park, Picnic Grove Park, Ruins Park, and The Yard (pocket parks) (Exhibit 2-5). It is assumed that the remaining recreation elements would be maintained via private ownership.

While the increase in population resulting from the implementation of the proposed project (both residential and non-residential uses) would increase demand for park and recreation services, including existing park and recreation facilities owned and maintained by the City as well as CARD, the proposed project would not exacerbate the existing parkland deficiency discussed above in Section 3.16.2, Environmental Setting, or result in substantial physical deterioration of existing facilities because the proposed project would provide sufficient park and recreation facilities to accommodate the anticipated increase in demand that would result from the introduction of residents as well as employment-generating uses. The approximately 15.8 acres of park, recreational, and open space amenities would exceed the LOS established by CARD and the City. Furthermore, the proposed project would be required to comply with Municipal Code Chapter 3.85, Article V, Park Facility Fees, which requires payment of applicable Park Facilities Fees in order to mitigate the impacts on park facilities caused by future development in the City. Finally, the General Plan contemplates development of the BYSP Area for residential and commercial uses and therefore, increased use of parks and recreational facilities as a result of future development has been long-anticipated.

Therefore, based on the foregoing, with the development of parks and recreation facilities proposed as part of the BYSP, and with the payment of applicable development impact fees, impacts would be less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Recreational Facilities' Physical Effect on Environment

Impact REC-2:	**The proposed project would involve the construction and operation of park and recreational facilities, which could result in an adverse physical effect on the environment but would not require the construction or expansion of recreational facilities beyond those contemplated by the proposed project.**

Impact Analysis

A significant impact would occur if implementation of the proposed project would result in an adverse physical effect on the environment due to (a) the inclusion of on-site park and recreational facilities, or (b) the triggering of the need to construct or expand off-site park and recreational

facilities to accommodate the increase in demand generated by the proposed project. Implementation of the proposed project is projected to generate an increase in demand on existing park and recreational facilities given the increase in residential population as well as demand that could result from the proposed employment-generating uses, thereby requiring the provision of new parks and recreational facilities to adhere to applicable General Plan/PRMP standards. As discussed in Section 3.13, Population and Housing, the addition of up to 1,250 new residential units could accommodate a total of approximately 2,975 new residents; in addition, employment-generating uses are assumed to increase demand to a certain degree. The BYSP Area does not currently contain any park or recreational facilities. As discussed above, the proposed project would create the equivalent amount of park open space to meet City and CARD standards of 1.5 park acres of neighborhood parkland and 2.5 acres of community parkland per 1,000 residents with the planned inclusion of a total of approximately 15.8 acres of parks and other amenities. The potential impacts associated with the construction and operation of proposed park and recreation amenities are discussed in conjunction with the other aspects of the overall project throughout this Draft EIR in each relevant environmental topic area. Given the provision of new park and recreational facilities contemplated as part of the proposed project, it is not anticipated that existing facilities would need to be expanded or other new facilities—beyond those proposed as part of the project—would need to be constructed to accommodate project demand.

Construction

Development of the proposed project, including the proposed park and recreation facilities, would be required to comply with the City's applicable development standards, design guidelines, and landscaping standards set forth in the Municipal Code as well as the BYSP. Further, the environmental impacts associated with the construction of the parks and recreation amenities described in this chapter are part of the proposed project and have been accounted for in the impact discussions of all relevant environmental topic areas within this Draft EIR.

As discussed in detail throughout this Draft EIR, potential construction-related impacts from the development of planned park and recreation amenities on-site would either be less than significant or would be reduced to less than significant levels with implementation of feasible mitigation. As part of the proposed project, new park and recreation amenities will be subject to applicable mitigation measures from this Draft EIR. Therefore, as documented throughout this Draft EIR, the construction of park and recreation amenities as part of the proposed project would have a less than significant impact and no additional mitigation is required to minimize or avoid adverse physical impacts on the environment.

Operation

The environmental impacts associated with the operation of the parks and recreation amenities described in this chapter have been accounted for in the impact discussions of all relevant environmental topic areas, including, among others, air quality, energy, geology and soils, greenhouse gas (GHG) emissions, noise, and transportation-related impacts within this Draft EIR.

As discussed in detail throughout this Draft EIR, potential operational impacts from the development of planned park and recreation amenities on-site would either be less than significant or would be reduced to less than significant levels with implementation of feasible mitigation. Operation of the

parks would have a significant or cumulatively considerable contribution to the overall project's air quality impacts of obstructing implementation of an air quality plan and adding a cumulatively considerable net increase of criteria air pollutants for which the region is non-attainment, which have been determined to be significant and unavoidable for the overall project. As part of the proposed project, new park and recreation amenities will be subject to applicable mitigation measures from this Draft EIR. Therefore, as detailed more fully herein, the operation of park and recreation amenities would have a less than significant impact and no additional mitigation is required to minimize or avoid adverse physical impacts on the environment.

As noted above, the proposed project would not trigger the need to (a) construct additional new off-site park and recreational facilities or (b) expand existing off-site facilities to accommodate the demand generated by the proposed project, and therefore no significant environmental impacts in this regard would occur.

Level of Significance

Potentially significant impact.

Mitigation Measures

See Mitigation Monitoring and Reporting Program (MMRP).

Level of Significance After Mitigation

Less than significant impact with mitigation incorporated.

3.15.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for recreation impacts is the BYSP Area, portions of the City of Chico and unincorporated Butte County adjacent to the BYSP Area, and the CARD service area. This analysis evaluates whether impacts of the proposed project, together with impacts of other cumulative development, would result in a cumulatively significant impact with respect to recreation. This analysis then considers whether incremental contribution of the impacts associated with implementation of the proposed project would have a cumulatively considerable contribution on any identified cumulative significant impact. Both conditions must apply for cumulative effects to rise to the level of significance.

The proposed project, in conjunction with other cumulative projects (as reflected in General Plan projections as identified in Chapter 3, Environmental Impact Analysis), would result in a number of new residential developments and commercial uses within the relevant geographic scope. The related increase in population and employment opportunities would result in an increased cumulative demand for park and recreation facilities, both of which have been anticipated by the General Plan. To help offset that demand, all residential projects listed under the cumulative list would be subject to park and recreation related development impact fees.

The proposed project and other cumulative projects would include the construction of various park and recreational facilities, which might have an adverse physical effect on the environment. The potential for construction of such facilities to result in environmental impacts would be reduced to

less than significant through implementation of applicable mitigation. Similarly, cumulative project recreational facilities would be required to comply with compulsory environmental regulations and project-specific mitigation. Therefore, cumulative impacts related to the construction or replacement of recreational facilities would be less than significant.

Moreover, the proposed project's incremental contribution to less than significant cumulative impacts would not be cumulatively considerable. As stated above, implementation of the proposed project would result in up to 1,250 new dwelling units, which could accommodate a total of approximately 2,975 new residents. Implementation of the BYSP would also provide additional employment opportunities as a result of the approximately 210,000 square feet of proposed new commercial uses that would be constructed as part of the proposed project over time. The proposed project would internally meet City and CARD standards of 1.5 park acres of neighborhood parkland and would be required to pay development impact fees that will assist the City and CARD achieving the PRMP goal of a minimum of 2.5 acres of community parkland per 1,000 residents. With the payment of applicable fees by cumulative projects, there would be a less than significant cumulative impact related to potential increased use and physical deterioration of existing parks and recreational facilities.

Level of Cumulative Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

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3.16 - Transportation

3.16.1 - Introduction

This section describes existing conditions related to transportation on the project site and vicinity as well as the relevant regulatory framework. This section also evaluates the potential impacts related to transportation that could result from implementation of the proposed project. Information in this section is based, in part, on the project-specific analysis contained herein and included as Appendix J.

The impact determinations are based on analysis of the proposed project's effect on Vehicle Miles Traveled (VMT), transit, bicycle and pedestrian circulation, and safety pursuant to applicable thresholds of significance. Where significant impacts are identified, feasible mitigation measures are recommended to lessen their significance.

Comments received in response to the Notice of Preparation (NOP) from public agencies and the public include concerns about increased traffic on streets in the area. These concerns are addressed, as appropriate, in this section. A copy of the NOP and comments received are included in Appendix A. The following public comments were received during the NOP scoping period related to transportation:

- Recommends/requests physical barriers between bicycles and vehicles.
- Requests the addition of West 17th Street as an access road.
- Consider the design of traffic calming corners.
- Address circulation issues to reduce traffic impacts.
- Emergency access issues.
- Concerns about the increase in number of vehicles parked in the area.
- New traffic signs (i.e., stops signs).
- Concerns about the increase in the amount of traffic because of new residences.
- Traffic control issues.
- Improving sidewalks to accommodate increase in vehicle traffic.
- Improvements to Ivy Street bridge.
- Concerns for safety due to construction traffic and impacts to traffic due to construction.
- Concerns over the potential increase in traffic near 14th Street if it is opened; requests to consider alternate routes.
- Increase in traffic, visitor parking, congestion, and safety concerns.
- Consider addition of bicycle routes and paths.
- Consider the addition of a traffic signal on 9th Street.
- Reconsider traffic plan to ensure increased traffic would not impact existing residences.

- Bicycle safety.
- Consider and encourage the use and integration of public transport.
- Include safety measure (i.e., roundabouts, crosswalks, traffic signals) and consider alternate forms of transportation.
- Increase in pollution to due increase in traffic.

The primary sources used to prepare this section include the Barber Yard Specific Plan (BYSP) Chico 2030 General Plan, Butte County 2024 Regional Transportation Plan/Sustainable Communities Strategy 2024–2045 *(*RTP/SCS),[1] Chico Bicycle Plan,[2] and City of Chico Design Guidelines.[3]

3.16.2 - Environmental Setting

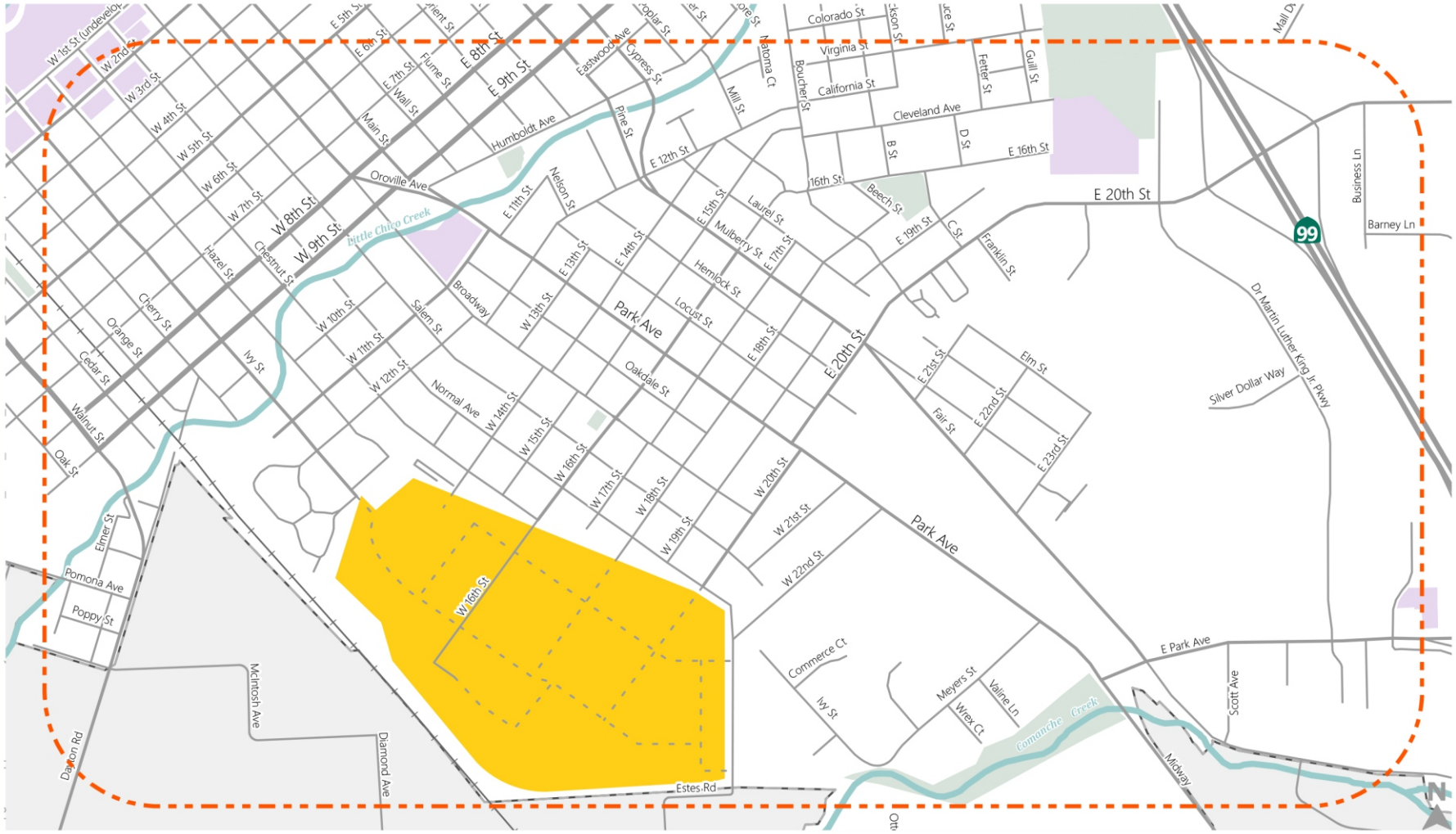
This section describes the environmental setting related to the transportation system. The setting represents the physical and operational transportation conditions under 2022 baseline conditions. The transportation system within the study area includes roadways, bicycle and pedestrian facilities, and public transit service and facilities.

Project Study Area

This analysis considers the project site and a broader study area in the vicinity, as shown in Exhibit 3.16-1 (study area). Much of the project site is in the Barber Neighborhood south of Little Chico Creek and west of Park Avenue in Chico. Major streets providing current access to the project site include Ivy Street and West 16th Street. The study area was determined based on the proposed project's expected travel characteristics (trip generation and distribution), primary travel routes to and from the project site, and travel mode split. A larger area extending throughout Butte County is also analyzed for potential VMT impacts.

Access to the project site is described in Chapter 2, Project Description. Ivy Street, 14th Street, 16th Street, 18th Street, and 20th Street would connect to the project site.

[1] Butte County Association of Governments (BCAG). 2024. Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) 2024-2045. December.
[2] City of Chico. 2019. Chico Bicycle Plan. April.
[3] City of Chico. 2009. Design Guidelines Manual. December.



Source: Fehr & Peers, 2024.

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Exhibit 3.16-1
Study Area

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Roadway Facilities

A network of local roadways and freeway facilities form the roadway system within the study area. Key roadways within the study area are described below.

Regional

State Route 99

State Route (SR) 99 is a California State Highway connecting Chico to other cities in the region such as Red Bluff, Yuba City, and Sacramento. SR-99 connects to the Interstate 5 (I-5) freeway north of Chico near Red Bluff. Within the study area, SR-99 is a four-lane freeway facility that connects to the City roadway network via interchanges at East 20th Street and East Park Avenue/Skyway.

Midway

Midway is primarily a two-lane arterial that begins south of East Park Avenue and provides a connection from Durham and ultimately dead ends at SR-162 in Richvale.

Local

Park Avenue

Park Avenue is a north–south principle arterial road that is an extension of Main Street to the northwest and becomes Midway to the southeast. It connects local businesses and California State University Chico (CSU Chico) to Midway and SR-99. Park Avenue is a divided four-lane roadway with various posted speed limits, ranging from 20 mph near school zones, 30 mph southwest of West 8th Street, and 45 mph southeast of West 20th Street. Bike lanes were recently installed on Park Avenue between 11th Street and 20th Street. A Class I multiuse path continues the bike network from East 20th Street to East Park Avenue, where it becomes the Chico-Durham Bike Path running parallel to Midway.

East 20th Street

East 20th Street is an east–west major arterial that begins to the east of Park Avenue and continues east through an interchange with SR-99 to Bruce Road, where the roadway becomes a collector through residential development. In the study area, East 20th Street is a divided four-lane roadway with channelized left turn pockets at major streets, sidewalks, and a posted speed limit of 35 mph.

West 8th Street and West 9th Street

West 8th Street and West 9th Street are one-way, two-lane principle arterial roads running parallel to each other through downtown Chico. West 8th Street is a one-way southeast bound and West 9th Street is a one-way northwest bound through residential neighborhoods and small businesses. The streets share alignment with SR-32, have sidewalks on both sides of the road, and have posted speed limits of 35 mph. In the study area, SR-32 shares alignment with Walnut Street until shifting to West 8th Street and West 9th Street.

Ivy Street

Ivy Street starts at the edge of the CSU Chico campus as a principle arterial road, connecting to the South Campus and Barber neighborhoods, becoming a minor arterial southeast of West 9th Street.

Ivy street is a two-lane roadway with sidewalks and a posted speed limit of 30 mph throughout. Class II buffered bike lanes are present on Ivy Street between West 3rd Street and West 10th Street.

West 14th Street, West 16th Street, West 18th Street, and West 20th Street

West 14th Street, West 16th Street, West 18th Street, and West 20th Street are two-lane local roads that serve residents in the existing adjacent Barber Neighborhood. Several sidewalk gaps are present on these roads west of Broadway, as discussed in the Pedestrian Facility section below. Bike lanes are not present on these roadways. The posted speed limit is 25 mph.

Estes Road

Estes Road is a two-lane local road that starts at the intersection of Normal Avenue and West 22nd Street and dead ends north of Comanche Creek. It is primarily a north-south street with a segment that splits east-west adjacent to an old railroad spur. Due to the low usage, there are no sidewalks present on Estes Road.

Roadway Conditions

For purposes of CEQA, potential impacts to the roadway system are evaluated based on the proposed project's potential to conflict with or preclude the City's ability to implement its policies and programs related to pedestrian, bicycle, and transit systems pursuant to the thresholds set forth in Appendix G, CEQA Guidelines, which the City has, in its discretion, determined to utilize in this analysis. The potential for on-street hazards due to geometric design or incompatible land uses were also evaluated pursuant to the thresholds set forth in Appendix G, CEQA Guidelines.[4] Physical roadway conditions have the potential to influence safety under specified circumstances, while VMT is a measure of how much driving occurs.

Vehicle Miles Traveled

To evaluate potential project impacts on VMT, the VMT metrics described in Table 3.16-1 are evaluated and compared against baseline conditions, which are defined as those conditions in existence when environmental review for the proposed project commenced (i.e., NOP issuance date). These metrics generally involve the tracing or accounting of vehicle trips and their length within a specific study boundary or from a specific trip generation source such as the project site. All metrics are estimated or forecasted using a modified Version (1.2) of the Butte County Association of Governments (BCAG) Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) travel demand model.[5]

[4] In addition to this analysis, which is required under CEQA, the proposed project's operational impacts to certain identified intersections have been evaluated in a separate LOS operational analysis (Traffic Operational Analysis). This non-CEQA evaluation is distinct from and in addition to the analysis set forth in this Section 3.17, supported by the attached Transportation Impact Analysis (Appendix J).

[5] Butte County Association of Governments. Regional Travel Demand Forecasting Model. Website: https://www.bcag.org/PlansProgramsModel/Transportation-Forecasting/index.html. Accessed December 16, 2024.

Table 3.16-1: Vehicle Miles Traveled Metric Definition and Visualization

Metric	Definition	Visualization
Total Network VMT	All vehicle trips (i.e., passenger and commercial vehicles) assigned on the network within a specific geographic boundary (i.e., model-wide, region-wide, citywide). Vehicle volume on each link is multiplied by link distance.	
Total VMT generated by a project	All vehicle trips are traced to/from the project site. For the proposed project, this metric captures all passenger and commercial vehicle VMT generated by the residents, workers, students, and visitors to the p**roject** site.	
Home-based VMT per resident	All home-based automobile vehicle trips are traced back to the residence of the trip-maker; non-home-based trips are excluded.	
Home-based work VMT per employee	All automobile trips between home and work are counted. (A variant might also count work-based other trips.)	

The BCAG RTP/SCS travel demand model produces 2020 VMT forecasts based on the Butte County 2020 RTP/SCS.[6] The BCAG RTP/SCS model is a trip-based model that simulates weekday travel conditions, accounting for land use, transportation, and demographic factors that influence travel behavior. The 2020 forecast year represents conditions that most closely match 2022 baseline conditions and, therefore, is utilized in this analysis for purposes of establishing baseline conditions. Prior to applying the model for this study, modifications to the model were made within the study area to improve the model's level of detail, sensitivity, and reasonableness. Specific modifications included the adjustment of vehicle speeds and removal of unnecessary or redundant network links.

Table 3.16-2 contains the baseline (2020) VMT forecasts for the VMT metrics described.

Table 3.16-2: Baseline (2020) Vehicle Miles Traveled Summary

VMT Metric	BCAG Region (approx.)	City of Chico[1] (approx.)	Near Project Site[2] (approx.)
Total Network VMT	4,719,086	1,239,926	NA
Home-based VMT per resident	15.0	6.8	8.8[3]
Home-based work VMT per employee	10.9	4.7	8.4[4]

Notes: NA = Not applicable

1 "City of Chico" represents City of Chico General Plan Planning Area

2 As the project site is currently primarily vacant, traffic analysis zones adjacent to the project site were selected to provide a representation of the selected VMT metrics.

3 Home-based VMT per resident in Traffic Analysis Zone (TAZ) 253, representing the residences westerly of Broadway and south of 16th Street.

4 Home-based work VMT per employee in TAZ 252, representing the businesses west of Park Avenue between West 22nd Street and Meyers Street. Existing employment land use in the project site is industrial only; therefore, this value is based on the most similar commercial land uses near the project site.

Source: BCAG RTP/SCS Travel Demand Model (modified Version 1.2)

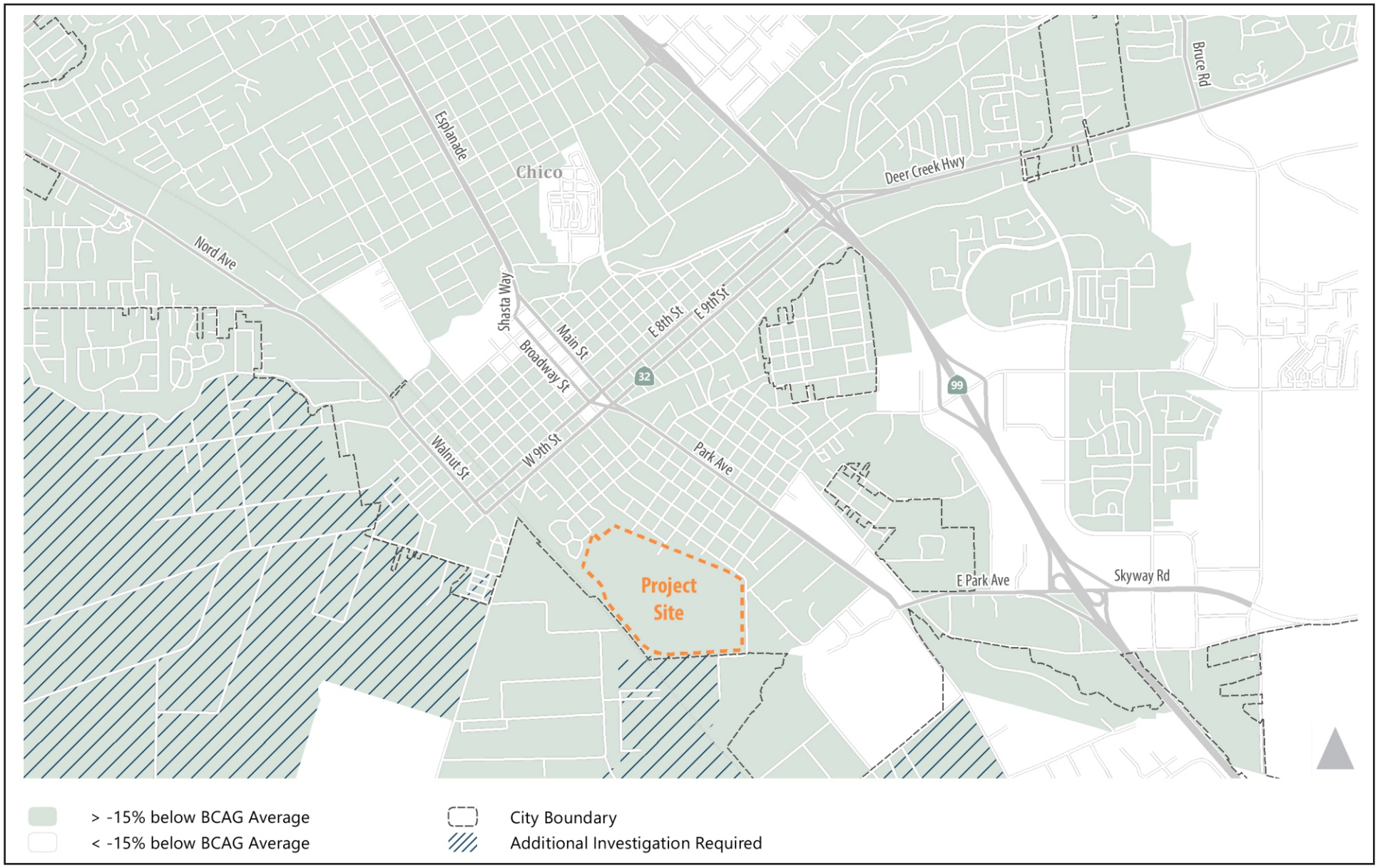
Exhibit 3.16-2a and 3.16-2b show how 2020 daily home-based VMT per resident and home-based work VMT per employee compared to 15 percent below the regional average. These maps utilize the 15 percent below BCAG average threshold established by BCAG and based on the California Governor's Office of Planning and Research (OPR) CEQA Guidelines, as discussed in Section 3.16.5.

Existing Public Transit Service and Facilities

Local Butte Regional Transit (B-Line) provides bus service in Chico and throughout Butte County. Four B-Line routes (Routes 5, 14, 17, and 32) serve within five blocks (roughly 0.3 miles) of the project site. Other routes in the study area include Routes 2, 4, 8, 9, 20 and 40/ 41.

Ten B-Line routes serve the study area, as shown on Exhibit 3.16-3 and described in Table 3.16-3.

6 Butte County Association of Governments (BCAG). 2020. Butte County 2020 Regional Transportation Plan/Sustainable Communities Strategy 2020-2040. December.



Source: Fehr & Peers, 2024.

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Exhibit 3.16-2a
2020 Daily Home-Based VMT per Resident Comparison to Regional Average

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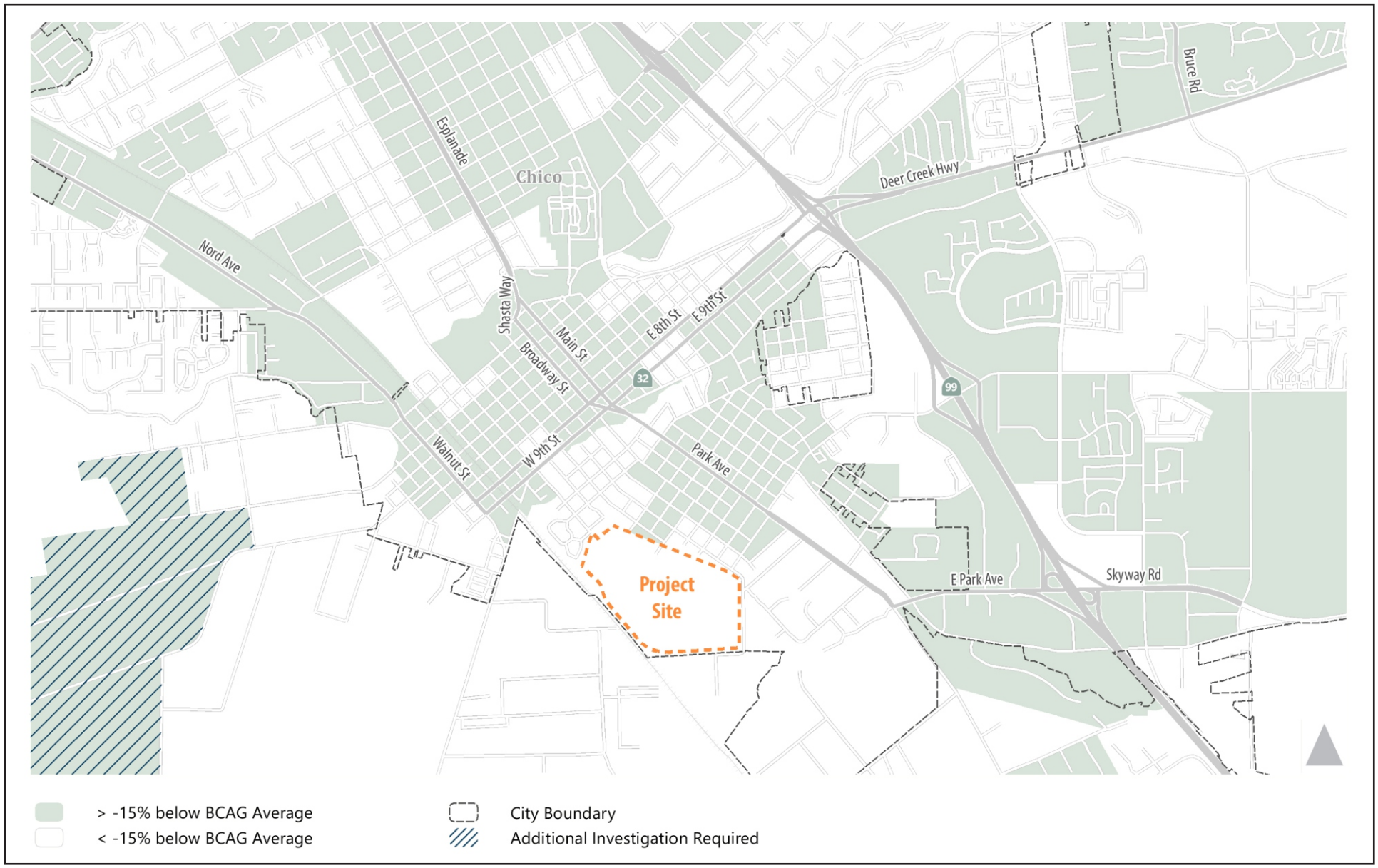

Source: Fehr & Peers, 2024.

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Exhibit 3.16-2b
2020 Daily Home-Based Work VMT per Employee Comparison to Regional Average

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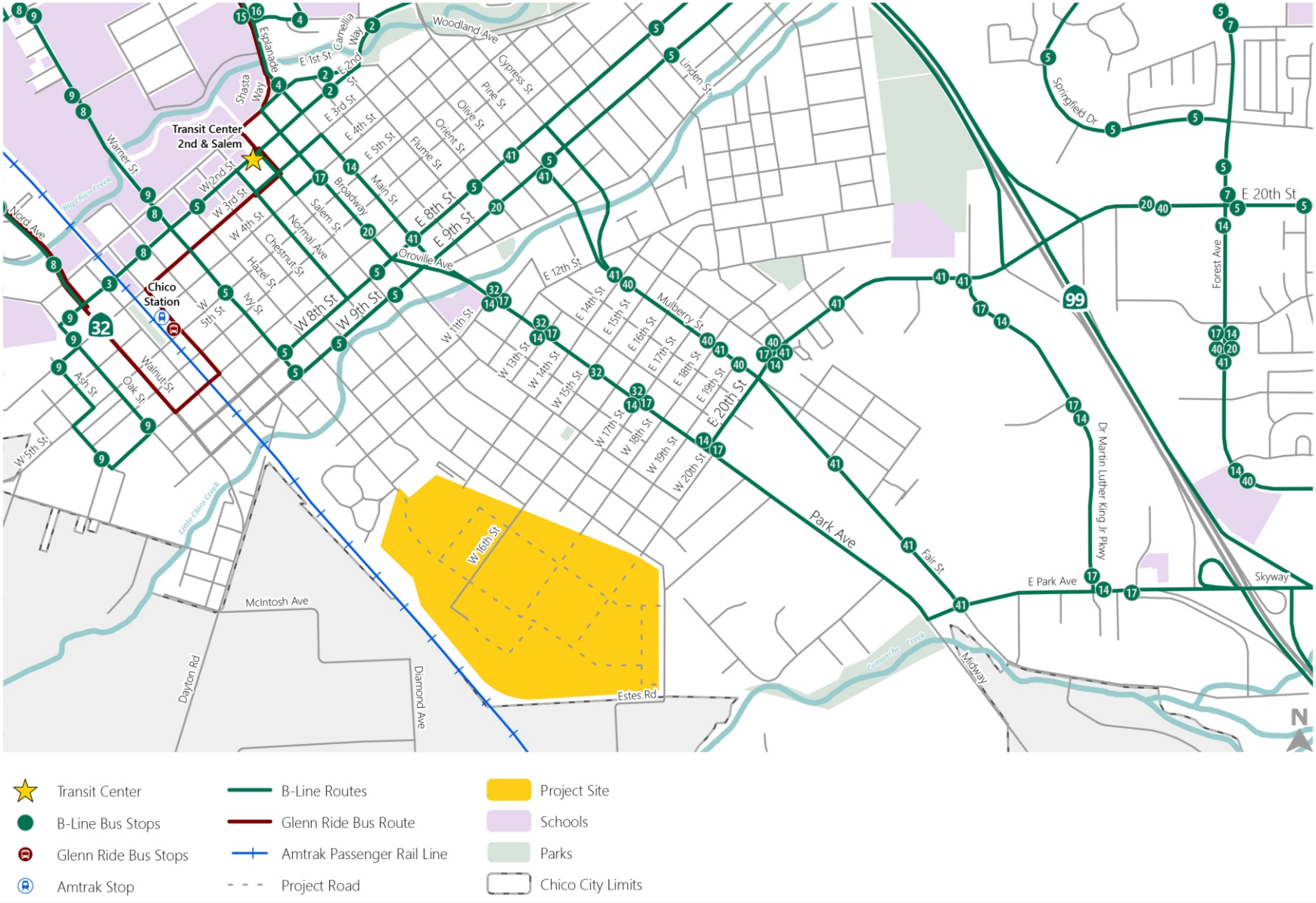

Source: Fehr & Peers, 2024.

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Exhibit 3.16-3
Existing Transit Facilities

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Table 3.16-3: Existing Transit Service Schedule Summary

Route	Weekday		Saturday	
	Freq. (min)	Span	Freq. (min)	Span
2–Mangrove	20–60	6:15 a.m.–8:34 p.m.	60	8:15 a.m. –7:00 p.m.
4–First/East	25–60	6:15 a.m.–9:00 p.m.	60	8:50 a.m.–7:00 p.m.
5–East 8th Street	20–60	6:15 a.m.–8:34 p.m.	60	8:15 a.m.–7:00 p.m.
8–Nord [1]	30–60	7:34 a.m.–9:34 p.m.	—	—
9–Oak/Warner/Cedar [1]	30–80	7:33 a.m.–10:01 p.m.	—	—
14–Park/Forest/MLK	20–60	6:24 a.m.–9:45 p.m.	60–120	7:50 a.m.–6:45 p.m.
17–Park/MLK/Forest	60	7:30 a.m.–6:05 p.m.	60	8:30 a.m.–6:05 p.m.
20–Chico/Oroville [2]	40–120	5:50 a.m.–8:00 p.m.	120–140	7:50 a.m.–6:00 p.m.
32–Gridley/Chico	Twice per day	6:40–7:40 a.m., 5:20–6:20 p.m.	—	—
40/41–Chico/Paradise/Magalia	20–150	6:35 a.m.–7:20 p.m.	Varies	9:50 a.m.–6:00 p.m.

Note:
Freq. = Frequency
min = minutes
[1] Routes 8 and 9 run until 4:00 p.m. Fridays.
[2] Route 20 is the only Route in the vicinity of the project site that runs on Sundays, when it runs from 7:50 a.m. to 6:00 p.m. with 1 to 2 hour frequencies.
Source: Butte Regional Transit. 2023.

Butte Regional Transit (B-Line) provides service within the City of Chico with 14 routes. Routes generally measure at or below 20 passengers per revenue hour with the exception of Routes 8 and 9, which are supported by higher ridership demand associated with CSU Chico. Routes operating below 20 passengers per revenue hour are considered underperforming. Generally, this level of performance is indicative of low demand and productivity. Routes performing at this level would have excess seating and standing capacity.

Several B-Line bus stops are located within half a mile of the project site. A bus stop for Route 5 is located near the intersection of Ivy Street and West 9th Street. A bus stop for Routes 14 and 17 is located near the intersection of Park Avenue and West 20th Street. A bus stop for Routes 14, 17, and 32 is located near the intersection of Park Avenue and West 17th Street. A bus stop for Route 32 is located near the intersection of Park Avenue and West 15th Street.

Frequencies of bus routes within a half mile of the project site exceed 15 minutes. Therefore, the project site is considered to not be within a “High Quality Transit Area” for the sake of VMT impact screening. However, most of the project site is located within a Transit Priority Project Area in the 2020 RTP/SCS; a 0.5-mile buffer is located along Park Avenue.

Bicycle Facilities

The following types of bicycle facilities exist within the study area:

- Class I–Class I facilities, commonly referred to as Bikeways or Bike Paths, are facilities separated from automobile traffic for the exclusive use of bicyclists. Class I facilities can be designed to accommodate other modes of transportation, including pedestrians and equestrians, in which case they are referred to as shared or multiuse paths.
- Class II–Class II facilities, commonly referred to as Bike Lanes, are dedicated facilities for bicyclists immediately adjacent to automobile traffic. Class II facilities are identified with striping, pavement markings and signage.
- Class III–Class III facilities, commonly referred to as Bike Routes or Bike Boulevards, are on-street routes where bicyclists and automobiles share the road. They are identified with pavement markings and signage and are typically assigned to low-volume and/or low-speed streets.
- Class IV–Class IV facilities are on-street bike lanes that are physically separated from the adjacent general vehicular travel lane. The separation may include grade separation, flexible posts, inflexible barriers, or on-street parking. Also referred to as protected bicycle lanes or cycle tracks.

The study area has a network of existing bicycle facilities. A Class I bike path is present on the north side of Park Avenue between West 20th Street and Midway. Class II bike lanes are present on segments of Ivy Street, Salem Street, Locust Street, East 20th Street and East Park Ave. Class III bike route designations are present on segments of Oak Street, Cherry Street, Chestnut Street, W 7th Street, Hemlock Street, Ivy Street and Meyers Street. Exhibit 3.16-4 displays the existing bicycle facilities in the study area.

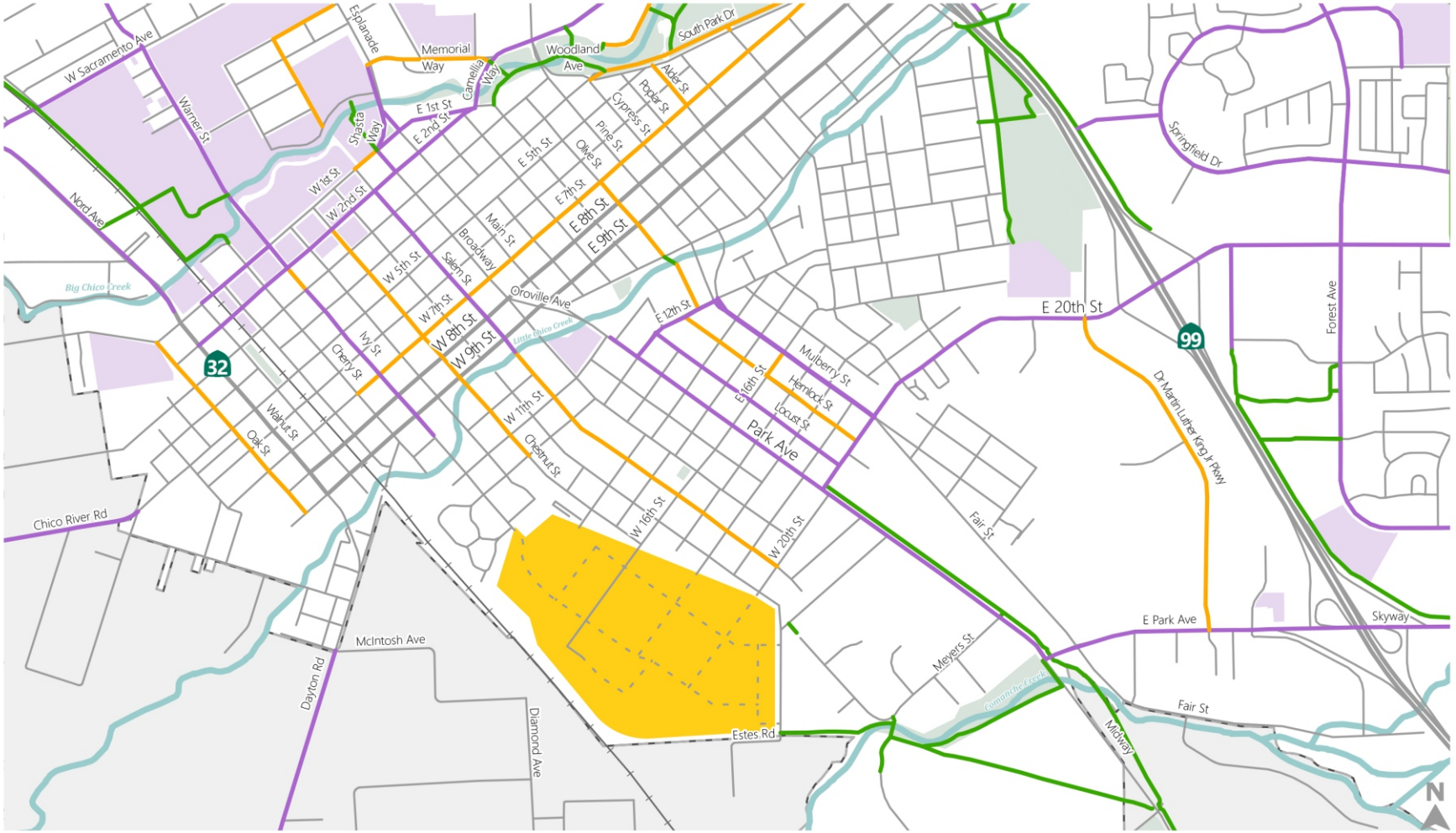
As the project site is currently mostly vacant, no on-site bike facilities are present.

Pedestrian Facilities

The immediate vicinity of the project site has sidewalks on the following streets: Ivy Street, Hazel Street, Chestnut Street, Salem Street, Broadway Street, Park Avenue, West 8th Street, and West 9th Street.

Existing sidewalk gaps are identified in the following streets: West 12th Street, West 13th Street, West 14th Street, West 15th Street, West 16th Street, West 17th Street, West 18th Street, West 19th Street, West 20th Street, Normal Avenue, and Estes Road.

Exhibit 3.16-5 shows existing crosswalks and gaps in sidewalks within the study area.



Source: Fehr & Peers, 2024.

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Exhibit 3.16-4
Existing Bicycle Facilities

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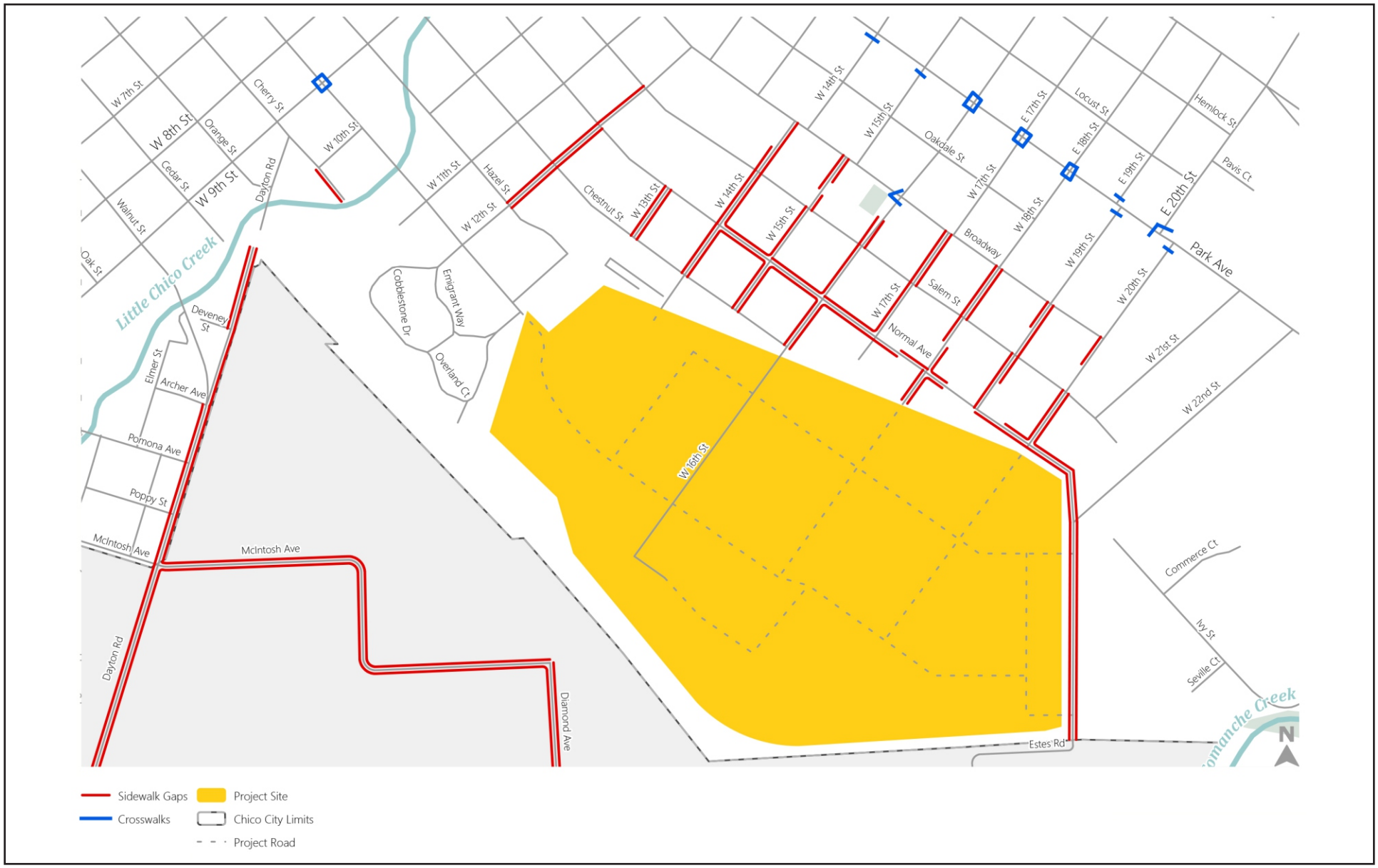

Source: Fehr & Peers, 2024.

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Exhibit 3.16-5
Existing Pedestrian Facilities

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Emergency Access and Routes

Because of the grided nature and short block lengths of the roadway network in the study area, emergency access is highly available. In case of an emergency in the existing adjacent Barber Neighborhood, evacuees and emergency responders could utilize the network of existing local and collector streets to reach arterials and freeways.

The project site is located in evacuation zones BUT-CH-196, BUT-CH-200, and BUT-CH201.

There are two existing fire stations within a one-mile radius of the BYSP Area:

- Chico Fire Department Station 1 on Salem Street and West 9th Street, an approximately 0.7 mile drive from the northern edge of the BYSP Area.
- Butte County Fire Station 44 on Fair Street near East 23rd Street, an approximately 0.6 mile drive from the eastern edge of the BYSP Area.

Enloe Medical Center on Esplanade, the largest hospital in Butte County, is an approximately 2.2 mile drive from the northern edge of the BYSP Area.

3.16.3 - Regulatory Framework

State

Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding reducing emissions from cars and light trucks. There are four major components of SB 375. First, SB 375 requires regional greenhouse gas (GHG) emissions targets. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations (MPOs) are required to create a Sustainable Communities Strategy (SCS) that provides a plan for helping to achieve regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on 8-year schedules. Finally, MPOs must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission. The applicable SCS for Butte County is the BCAG 2020 RTP/SCS.

Senate Bill 743

SB 743, passed in 2013, required OPR to develop new State CEQA guidelines that address transportation impact metrics under CEQA. On December 28, 2018, the CEQA Guidelines were amended to add Section 15064.3, Determining the Significance of Transportation Impacts, which states that generally, VMT is the most appropriate measure of transportation impacts. In addition to making VMT the preferred metric, Section 15064.3(a) also prohibited the use of delay from being used to determine environmental impacts stating, “Except as provided in subdivision (b)(2) (regarding roadway capacity), a project’s effect on automobile delay shall not constitute a significant environmental impact.” This prohibition is reinforced by the CEQA Statute, Public Resources Code Section 21099(b)(2), “Upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar

measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any." Beginning on July 1, 2020, the provisions of CEQA Guidelines Section 15064.3 and Public Resources Code Section 21099 applied statewide.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory)[7] provides advice and recommendations to CEQA lead agencies on how to implement SB 743. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion. Key guidance from this document includes the following:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that a per resident or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. In other words, a residential or office project that generates VMT per resident or employee that is more than 85 percent of the regional VMT average could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this reduction to the State's emission goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement would lead to an overall decrease in VMT, the project would lead to a less than significant transportation impact. If the project would lead to a net overall increase in VMT, then the thresholds above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

The Technical Advisory also provides guidance on impacts on transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network."

On December 18, 2019, California's Third District Court of Appeal published an opinion in Citizens for Positive Growth and Preservation v. City of Sacramento, which involved a challenge to the City of Sacramento's adoption of its General Plan based on LOS instead of VMT for transportation impact identification. In reaching its decision in that case, the Court of Appeal applied Public Resource Code Section 21099(b)(2) and stated, "existing law is that 'automobile delay, as described solely by level of

[7] California Governor's Office of Planning and Research. (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December.

service, or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment under CEQA, except for roadway capacity projects.'" The Court therefore concluded that the General Plan's policies that included LOS standards could not be used as a threshold to determine whether the project would have a significant environmental impact under CEQA. VMT is used to identify the proposed project's potentially significant transportation impacts for the purposes of this Draft EIR.

Caltrans Construction and Safety Requirements

Caltrans issued the VMT-focused Transportation Impact Study Guide (TISG) in September 2020, which details the methodology for calculating induced travel demand for capacity-increasing transportation projects on the State Highway System. In addition, Caltrans issued the Transportation Analysis Under CEQA Guidance in September 2020, which describes significance determinations for capacity-increasing projects on the State Highway System.

Caltrans also issued Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance in December 2020, describing the methods with which Caltrans will assess the safety impacts of projects on the Caltrans-owned and operated network. This guidance states that Caltrans will provide its safety assessment to lead agencies for inclusion in environmental documents to the extent required under CEQA.

Finally, Caltrans has adopted procedures to oversee construction activities on and around its facilities. The Caltrans Construction Manual describes best practices for construction activities, including personnel and equipment safety requirements, temporary traffic control, signage, and other requirements aimed at reducing construction-related hazards and constructing projects safely and efficiently. Any work on Caltrans facilities for the proposed project would be required to abide by these requirements.

Assembly Bill 1358

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include "Complete Streets" policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly and the disabled. These policies can apply to new streets as well as the redesign of corridors.

Regional

BCAG 2020 RTP/SCS

BCAG is responsible for the preparation of, and updates to the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) and the corresponding Regional Transportation Improvement Program (RTIP). The current RTP/SCS was formally adopted on December 10, 2020, and provides a 20-year transportation vision for the region and corresponding list of projects. The RTIP identifies short-term projects (5-year horizon) in more detail.

The RTP/SCS includes the following relevant planned projects in the project study area:

- Ivy Street over Little Chico Creek between 9th and 11th Streets (Bridge No. 12C0279): Rehabilitate and widen the existing two-lane bridge to a full width two lanes with shoulders. Programmed for 2026.
- Salem Street over Little Chico Creek, 0.1 mile north of 10th Street (Bridge No.12C0336): Rehabilitate functionally obsolete two-lane bridge. No added lane capacity. Programmed for 2024.
- Chestnut Street at Little Chico Creek at West 9th Street. Methacrylate Deck treatment. Programmed for 2028.

Local

As described above, while not required by CEQA, some of the policies listed below would support a non-CEQA LOS operational evaluation; therefore, a separate report reflecting this LOS analysis for the proposed project identifying applicable improvements has been prepared by the City's transportation consultant (Fehr & Peers) for the City's consideration prior to approval of the proposed project.

City of Chico 2030 General Plan

The City of Chico 2030 General Plan (General Plan) was adopted in 2011 and amended in 2017 and provides long-range direction and policies for the use of land within the City. The Circulation Element of the General Plan provides the framework for achieving the City's transportation system goals. The Circulation Element outlines the goals and policies necessary for the City to achieve its vision of a multimodal transportation network that accommodates vehicles, transit, bicycles, and pedestrians. For the purposes of this Draft EIR, the goals and policies of this document were used to evaluate potential impacts related to the significance criteria, as appropriate.

Circulation Element

The General Plan Circulation Element includes the following goals, policies, and actions related to transportation that are relevant to this analysis:

Goal CIRC-1 Provide a comprehensive multimodal circulation system that serves the buildout of the Land Use Diagram and provides for the safe and effective movement of people and goods.

Policy CIRC-1.1 **(Transportation Improvements)**–Safely and efficiently accommodate traffic generated by development and redevelopment associated with buildout of the General Plan Land Use Diagram.

Action CIRC-1.1.1 **(Road Network)–**Enhance existing roadways and intersections and develop the roadway system shown in Figure CIRC-1 (Roadway System Map) over the life of the General Plan as needed to accommodate development.

Policy CIRC-1.2 **(Project-Level Circulation Improvements)**–Require new development to finance and construct internal and adjacent roadway circulation improvements as

necessary to mitigate project impacts, including roadway, transit, pedestrian, and bicycle facilities.

Policy CIRC-1.3 **(Citywide Circulation Improvements)**–Collect the fair share cost of circulation improvements necessary to address cumulative transportation impacts, including those to State highways, local roadways, and transit, pedestrian and bicycle facilities, through the City's development impact fee program.

Policy CIRC-1.5 **(Vehicle Miles Traveled Analysis)**–Consistent with State law, implement Vehicle Miles Traveled (VMT) assessments as part of the environmental review process under CEQA.

Action CIRC-1.5.1 **(VMT CEQA Analysis)**–For projects that require a full traffic analysis as part of the CEQA review process, perform a VMT analysis consistent with the California Governor's Office of Planning and Research CEQA Guidelines.

Goal CIRC-2 Enhance and maintain mobility with a complete streets network for all modes of travel.

Policy CIRC-2.1 **(Complete Streets)**–Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.

Action CIRC-2.1.3 **(Multimodal Connections)**–Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.

Policy CIRC-2.2 **(Circulation Connectivity and Efficiency)**–Provide greater street connectivity and efficiency for all transportation modes.

Action CIRC-2.2.1 **(Connectivity in Project Review)**–New development shall include the following internal circulation features:

- A grid or modified grid-based primary street system. Cul-de-sacs are discouraged, but may be approved in situations where difficult site planning issues, such as odd lot size, topography, or physical constraints exist or where their use results in a more efficient use of land, however in all cases the overall grid pattern of streets should be maintained.
- Traffic-calming measures, where appropriate.
- Roundabouts as alternative intersection controls, where appropriate.
- Bicycle and pedestrian connections to adjacent streets, trails, public-spaces, and bicycle paths.
- Short block lengths consistent with City design standards.

Action CIRC-2.2.2 **(Traffic Management)**–Perform routine, ongoing evaluation of the street traffic control system, with emphasis on traffic management, such as signal timing and

coordination or the use of roundabouts, to optimize traffic flow along arterial corridors and reduce vehicle emissions.

Goal CIRC-3 Expand and maintain a comprehensive, safe, and integrated bicycle system throughout the City that encourages bicycling.

Policy CIRC-3.3 **(New Development and Bikeway Connections)–**Ensure that new residential and nonresidential development projects provide connections to the nearest bikeways.

Action CIRC-3.3.1 **(Bikeway Requirements)**–Require pedestrian and bicycle connections to the Citywide bikeway system every 500 feet, where feasible, as part of project approval and as identified in the Bicycle Master Plan.

Goal CIRC-4 Design a safe, convenient, and integrated pedestrian system that promotes walking.

Policy CIRC-4.2 **(Continuous Network)**–Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free from major impediments and obstacles.

Goal CIRC-5 Support a comprehensive and integrated transit system as an essential component of a multimodal circulation system.

Policy CIRC-5.3 **(Transit Connectivity in Projects)**–Ensure that new development supports public transit.

Action CIRC-5.3.2 **(Transit Improvements for New Development)**–During project review, consult with BCAG to determine appropriate requirements for the installation of stops and streetscape improvements, if needed to accommodate transit.

Safety Element

The General Plan Safety Element includes the following actions related to fire response time that is relevant to this analysis:

Action S-4.1.1 **(Fire Response Time)**–Strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency response calls in urbanized areas.

Chico Bicycle Plan 2019 Update

The *Chico Bicycle Plan 2019 Update*[8] establishes goals and objectives for recreational and transportation-related bicycle use in Chico. The plan identifies future on- and off-street bicycle facility improvements. The following planned bike facilities are identified in the study area:

[8] City of Chico. 2019. Chico Bicycle Plan 2019 Update. April.

- Class I Bike Paths:
  - Along Big Chico Creek from the existing path to Pomona Avenue
  - Along MacIntosh Avenue and crossing the Union Pacific Railroad (UPRR) tracks to Estes Road south of the BYSP Area
- Class II Bike Lanes:
  - On Ivy Street between West 22nd Street and Meyers Street
- Class III Bike Boulevards:
  - On Ivy Street from 9th Street into the BYSP Area
  - On Chestnut Street between West 2nd Street and 20th Street
  - On Salem Street between Big Chico Creek and 20th Street
  - Along the entirety of 16th Street
  - On 20th Street from Park Avenue into the BYSP Area
  - Along Normal Avenue/Estes Road between 20th Street and the Comanche Creek Trail
- Class IV Protected Bike Lanes:
  - On Park Avenue from Humboldt Avenue to 20th Street

Chico Climate Action Plan Update

The Climate Action Plan Update[9] was developed to create a plan for a safer and more resilient future in the face of severe weather and natural disasters, droughts, wildfires, and flooding, which are all projected to worsen across the State due to climate change. The plan includes specific actions to reduce greenhouse gas (GHG) emissions (including carbon dioxide, methane, and nitrous oxide emissions) and achieve the City's target of carbon neutrality by 2045.

The following transportation measures and actions are relevant to this analysis:

Measure T-1 **Improve Active Transportation Infrastructure to achieve greater than 6 percent bicycle mode share by 2030 and 12 percent bicycle mode share by 2045.**

Action T-1-1 Implement the Chico Bicycle Plan 2019 Update in accordance with the Plan's goals, objectives, and policies. Implementation of the Plan may include:

- Adding additional miles to the bikeway network.
- Implementing new end-of-trip facilities and enforcement protocols to reduce bicycle theft.
- Conducting road repairs and road maintenance.
- Improving/expanding wayfinding, safety, and comfort.
- Integrating with transit and other transport modes.
- Conducting promotion and education around biking in Chico.

Action T-1-2 Require shaded and convenient bike parking

[9] City of Chico. 2021. Climate Action Plan Update.

- Require shaded Park-a-Bike style rack or equivalent when installing bike parking in new development.

Action T-1-3 Require major road upgrades to include bicycle infrastructure.

Action T-1-4 Perform a street/intersection study.

- Conduct a street/intersection study to identify streets and intersections that can be improved for pedestrians and bicyclists through traffic-calming measures and/or where multiuse pathway opportunities exist to increase active transportation.

Action T-1-5 Complete an active transportation plan.

- Develop and implement an active transportation plan (consistent with the General Plan) that identifies funding strategies and policies for development of pedestrian, bicycle, and other modes of alternative transportation projects.
- Pave shoulders of streets that have high traffic counts.
- Separate bike lanes from motor traffic with concrete bumper blocks or better.
- Establish a safe east–west connection over Highway 99.

Action T-1-7 Create a bicycle/pedestrian coordinator position for the City to ensure implementation of active and shared mobility measures.

Measure T-3 Improve shared mobility and transit programs and infrastructure.

Action T-3-1 Partner with BCAG to improve and expand transit within the City.

Action T-3-2 Prepare for shared bike programs.

Action T-3-7 Encourage use of local transit. Promote use of B-Line for transit.

Action T-3-8 Invest in Transportation Demand Management (TDM) strategies.

Measure T-4 Implement parking and curb management procedures that support the mode shift goals of the overall transportation strategy.

Action T-4-2 Improve curbside management.

Measure T-5 Support Implementation of the City's General Plan that promotes sustainable infill development and mixed-use development in new growth areas to reduce Vehicle Miles Traveled.

Action T-5-1 Support infill growth.

City of Chico Municipal Code

Municipal Code Section 3.85 addresses the adoption and assessment of development fees, including fees for transportation facilities needed to support new development.

City of Chico Code of Ordinance Title 18R

Title 18R of the Code of Ordinance sets forth design criteria for the purpose of ensuring that subdivision and non-subdivision public right-of-way and private street improvements constructed within the City are designed in such a manner that each meets or exceeds uniform levels of sound engineering practice and that the individual elements contained therein have a uniform level of development with no single element overdesigned to the detriment of another.

Southwest Chico Neighborhood Improvement Plan

Adopted in 2008, the Southwest Chico Neighborhood Improvement Plan (SWCNIP)[10] is a guideline for infrastructure development in the existing adjacent Barber Neighborhood, along Park Avenue, industrial areas near Meyers Street and Fir Street, and the Little Chico Creek and Comanche Creek corridors.

Recommendations in the SWCNIP in the study area include circulation improvements at intersections on Ivy Street south of 9th Street, on Normal Street between 14th Street and 22nd Street, at the intersection of 20th Street and Park Avenue, and traffic calming along Broadway Street. Objectives for what the SWCNIP refers to as the "Diamond Match Site" (i.e., BYSP Area) include:

- Create multiple automobile, bicycle, and pedestrian linkages between new development in Diamond Match and the Barber Neighborhood.
- Facilitate regional bicycle connections.
- If industrial or light industrial uses are proposed, avoid intermixing industrial and residential circulation networks.

The SWCNIP emphasizes maximizing connections between the Diamond Match Site and the Barber Neighborhood and calming traffic upon new development.

3.16.4 - Methodology

The proposed project's transportation impact analysis consists of quantitative and qualitative evaluations pursuant to applicable thresholds of significance. The screening methodology, thresholds, and VMT generation rate expectations are based on the recommendations contained in the Technical Advisory on Evaluating Transportation Impacts in CEQA.[11] Potential VMT impacts are evaluated using a screening process that relies on quantitative forecasts derived from the modified Version 1.2 of the BCAG RTP/SCS travel demand model. This information is intended to help determine whether the proposed project would generate VMT at rates that exceed levels necessary to achieve State of California GHG emissions reduction goals pursuant to applicable significance

[10] City of Chico. 2008. Southwest Chico Neighborhood Improvement Plan. December.
[11] California Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December.

thresholds. As noted above, the OPR Technical Advisory identifies that a reduction in vehicle travel that is 15 percent or more below existing baseline conditions may indicate a less than significant transportation impact. The City of Chico opted to measure this metric on a regional (Countywide) basis to maintain consistency with the BCAG SB 743 Implementation and as allowed in the OPR Technical Advisory. A 15 percent reduction in VMT is shown in the Technical Advisory to both be achievable and supported by evidence connecting this level of reduction to the State's long-term emissions goals. The use of VMT is a proxy for carbon dioxide equivalents (CO_2e). Therefore, the utility of VMT for the transportation analysis depends on the relationship between vehicle emissions of CO_2e and VMT.

For the transit, bicycle and pedestrian, and safety components of the transportation system, this CEQA analysis focuses on whether the proposed project would substantially disrupt baseline facilities or services or substantially interfere with the implementation of planned improvements such that the proposed project would conflict with any relevant program, plan, ordinance or policy addressing transit, bicycle and pedestrian facilities. The safety evaluation considers whether the proposed project's contemplated construction of or modifications to these facilities are consistent with applicable design standards such that no substantial increase in hazards (due to a geometric design feature or incompatible uses) would occur with implementation of the proposed project.

3.16.5 - Thresholds of Significance

Appendix G of the CEQA Guidelines includes a sample checklist to assist in the consideration of environmental impacts under CEQA. The following four areas are identified as potential areas of transportation impacts:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access?

The City of Chico, in its discretion, has determined to utilize the following thresholds consistent with Appendix G of the CEQA Guidelines in this analysis to evaluate the proposed project's potential transportation-related impacts. The City does not have its own adopted thresholds for VMT impacts. Per Action CIRC-1.5.1 of the 2030 Chico General Plan, this analysis applies a threshold based on guidance provided in the OPR CEQA Guidelines, as detailed further below.

A significant impact would occur if development of the proposed project would do any of the following:

- Result in average VMT in excess of any of these thresholds:

  - For residential uses, a significant impact would occur if a project generates home-based VMT per resident at a rate that is greater than 85 percent of the regional baseline (Butte County Average). [12]
  - For employment uses (except retail), a significant impact would occur if a project generates home-based work VMT per employee at a rate that is greater than 85 percent of the regional baseline (Butte County Average).
  - For retail not screened out as locally serving, a significant impact would occur if total regional (Butte County) VMT increases due to the project.
- Adversely affect existing or planned bicycle facilities or fail to adequately provide for access by bicycle consistent with policies contained in the City of Chico General Plan and Chico Bicycle Plan.
- Adversely affect existing or planned pedestrian facilities or fail to adequately provide for access by pedestrians consistent with policies contained in the City of Chico General Plan.
- Adversely affect existing transit service, interfere with planned transit service, or cause a physical change inconsistent with transit policies contained in the City of Chico General Plan.
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

Relevant Policies from the Barber Yard Specific Plan

The BYSP includes a vision to guide the implementation of the Specific Plan:

> The vision of the BYSP is to redevelop the BYSP Area as a new mixed-use neighborhood with a distinct sense of place. Residential neighborhoods are envisioned as safe and walkable, with parks, neighborhood retail, recreational, and entertainment clusters to serve the community. Buildings are envisioned to have contextual architectural features and link to the surrounding neighborhood's character. The infrastructure is envisioned to be attractively integrated into the development.

The BYSP includes the following objectives related to transportation that are relevant to this analysis:

- Direct development toward the existing Barber Neighborhood, Downtown, and Chico State, supporting density over sprawl.
- Embrace a variety of transportation choices, including access to public transit, support for people-powered modes, and accommodation of emerging technologies.
- Create walkability throughout the planning area and into the surrounding neighborhood.

[12] For the purposes of the VMT analysis, the region is defined as all VMT from travel in Butte County and the VMT for travel that has at least one end (origin or destination) in Butte County.

Under the Streets and Mobility section of the Specific Plan, the following objectives outline the general design principles that informed the plan:

- Build on the historic grid system in the adjacent Barber Neighborhood to balance the load of additional traffic created by the new development.
- Improve transportation safety for all modes to encourage increased walking, bicycling, and public transit use.
- Implement traffic-calming measures to slow vehicular speeds and mitigate congestion both on and off-site.
- Cluster uses to encourage walkability.
- Accommodate the accessibility needs of all people. Public surfacing(s) must comply with all Americans with Disabilities Act (ADA) and Title 24 requirements.
- Provide a more equitable and robust transportation system, both locally and regionally.
- Provide a parking network that allows for flexibility and efficiency in the use of urban space while enhancing the viability of desired development.
- Minimize conflicts between competing mobility modes on high-volume routes.
- Promote active engagement with new mobility technologies to improve systems continuously.

If and when the BYSP is adopted, these objectives would direct development and future buildout of all phases of the proposed project. For the purposes of this Draft EIR, the street and other transportation improvements required by the BYSP objectives in this document were used considered in evaluating the proposed project against the identified thresholds of significance.

Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed project and provides feasible mitigation measures where necessary.

Vehicle Miles Traveled

Impact TRANS-1:	**The proposed project would not result in average VMT in excess of any of the applicable thresholds. It would generate home-based VMT per resident at a rate less than 85 percent of the regional baseline for residential uses. For the health/fitness club use and Engineering Building event center use, the proposed project would generate home-based work VMT per employee at a rate less than 85 percent of the regional baseline. The inclusion of local retail uses contributes to the lower VMT generation rates for the proposed project's households.**

The proposed project has not been screened out based on the screening thresholds contained in the OPR Technical Advisory, and thus a detailed VMT analysis has been prepared.

As shown in Exhibit 3.16-2a and Exhibit 3.16-2b and Table 3.16-4, the proposed project would produce VMT generation rates lower than the applicable threshold for residential and work-related (i.e., the health/fitness club and events center) land uses.

Table 3.16-4: Vehicle Miles Traveled Impact Evaluation

VMT Metric	BCAG Region (2020 baseline)	Threshold (85% of baseline)	BYSP Project
Home-based VMT per resident	15.0	12.8	11.5
Home-based work VMT per employee	10.9	9.3	2.5

Notes:
VMT estimates were developed using a modified version of the Butte County Association of Governments (BCAG) Travel Demand Forecasting (TDF) model that was developed for the preparation and analysis of the 2020 Regional Transportation Plan/Sustainable Communities Strategy.
Source: 2020 BCAG RTP/SCS Travel Demand Model (modified Version 1.2)

The proposed project's lower VMT efficiency metrics relative to the regional average are due to several factors including the following:

- Location–The proposed project would be located within the Chico City limits, within walking and biking distance of Downtown Chico. Most of the project site is also within 0.5 mile of Park Avenue, a key transit corridor.
- Land Use Diversity–The proposed project includes a mix of land uses, including single and multi-family residential, local serving commercial, a large health/fitness club, and recreational and open space uses.
- Medium High-Density Residential (Multi-Family)–The proposed project includes higher density residential land use, with an approximate overall multi-family residential density of 28.3 dwelling units per acre (438 multi-family residences on 15.5 gross acres) located within walking distance to the Downtown Chico and future commercial land uses within the BYSP Area.

The lower VMT generation rates demonstrate that this impact is less than significant for residential and work-related land uses.

A less than significant finding also applies to the local retail uses. The proposed retail uses would consist of buildings less than 50,000 square feet and which would be designed to support the residential uses of the proposed project and the surrounding neighborhood. Without the local retail uses, residents of the proposed project would have to travel farther for their retail needs. These are unique uses where the location of the use would have substantial influence on trip lengths and therefore VMT. The employees of the local serving retail are likely to exhibit similar home-based work VMT rates as the rest of the proposed project as noted above in Table 3.16-4 because of proximity between home and work. In addition, customers and visitors are likely to exhibit shorter trip lengths that are influenced by the City's efficient land use pattern, which helps to lower the total VMT created by the proposed project. Average trip lengths in Chico are 8.8 miles while the average trip length for the BCAG region is 10.6 miles. Therefore, this impact is considered less than significant.

Recreational uses on-site, including Picnic Grove Park, Ruins Park, and The Diamond, are not anticipated to generate new vehicle trips beyond those considered otherwise in this analysis and, therefore, are not included in the quantitative VMT impact analysis.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Bicycle Facilities

Impact TRANS-2:	**The proposed project would generate substantial demand for bicycle facilities on streets near the project site without associated bicycle infrastructure improvements, causing a physical change inconsistent with General Plan policies (CIRC-2.1, CIRC-2.2, CIRC-3.1, CIRC-3.3) and bicycle policies contained in City of Chico Bike Plan 2019 Update.**

As described more fully in the BYSP, the proposed project includes a comprehensive network of on-site bicycle facilities that would likely generate substantial travel by bicycle within the BYSP Area for recreation as well as provide bicycle access to all land uses within the BYSP Area. These improvements would include connections to existing bicycle facilities on Ivy Street and 16th Street.

The proposed project would not adversely affect existing or planned bicycle facilities identified in the Chico Bicycle Plan 2019 Update ("Bicycle Plan"); however, the proposed project would generate the demand for upgraded bicycle facilities as specified in the Bicycle Plan. With the mitigation specified below, the proposed project would be consistent with the following goals identified in the Bicycle Plan.

- **Goal 1:** Design and implement a complete bikeway network that connects people with the places they want to go, and supports bicyclists of all ages, ethnicities, incomes, and abilities.
- **Goal 2:** Improve safety, efficiency, and comfort for bicyclists on the bikeway network.
- **Goal 4:** Provide and plan for bicycle facilities during land development review.
- **Goal 5**: Promote bicycling as a part of the multimodal transportation system.
- **Goal 7:** Encourage and support both recreational and utilitarian use of the bikeway network.

The General Plan Circulation Element identifies numerous policies aimed at expanding and maintaining a comprehensive, safe, and integrated bicycle system throughout the City. Policy CIRC-3.1 supports implementation of the City's Bicycle Master Plan including Action CIRC-3.1.1, which targets incorporation of bicycle facilities into private development projects. Policy CIRC-3.3 requires new residential projects to provide connections to the nearest bikeways, similar to Policy CIRC-2.1,

which requires multimodal connections between new and existing neighborhoods for pedestrians, automobiles, and bicycles.

The BYSP indicates (see Exhibit 2-7) that bicycle facilities constructed within the BYSP Area would connect to bicycle facilities on Ivy Street, West 16th Street, West 20th Street and Estes Road. Further, the BYSP includes numerous objectives that support recreation and trip making by non-auto modes, including biking:

- Improve transportation safety for all modes to encourage increased walking, bicycling, and public transit use.
- Implement traffic-calming measures to slow vehicular speeds and mitigate congestion both on and off-site.
- Minimize conflicts between competing mobility modes on high-volume routes.
- Promote active engagement with new mobility technologies to improve systems continuously.

As pointed out in the BYSP, "Barber's gridded street system provides opportunities for a high level of bicycle accessibility and multiple direct travel paths between destinations." The proposed project would provide adequate bicycle access by incorporating a robust bicycle network consisting of the following facilities as shown in Exhibit 3.16-6.

- Class I Paths: Multiuse paths (10-12 feet in width) would be constructed on at least one side of all proposed major "framework" streets that connect to existing streets.
- Class II Bike Lanes: 7-foot-wide buffered bike lanes are proposed on Ivy Street and 16th Street adjacent to the BYSP Area.
- Class III Bike Boulevards: Bike boulevards are proposed on smaller residential streets, including 18th Street between Hazel Street and Ivy Street.

The bikeways would help connect to the recreational opportunities provided by the Comanche Creek Trail to the east of the project site. On-street and off-street bike parking facilities would be provided throughout the BYSP Area. Under current California law, e-bikes and motorized and nonmotorized scooters would also be able to use the bike network.

Overall, the proposed project, at full buildout, would implement approximately 2 miles of on-site bicycle facilities. All bicycle facilities proposed in the BYSP Area are of the same class or higher than those proposed in the Chico Bicycle Plan 2019 Update. While the proposed project's extensive internal bicycle network exceeds what is proposed in the Chico Bicycle Plan 2019 Update and would not adversely affect existing or planned bicycle facilities in the Bicycle Plan, the BYSP does not explicitly include any indication of the planned financing or construction of adjacent roadway circulation improvements to connect to existing nearby bikeways, leaving the bicycle network inconsistent with General Plan Policies CIRC-1.2 and CIRC-3.3. This is considered a significant impact.

To comply with General Plan Policies CIRC-2.1 and CIRC-3.3 to finance and construct complete streets with connections to the nearest bikeways, Mitigation Measure (MM) TRANS-2 is proposed.

Compliance with this mitigation would ensure the proposed project is consistent with the General Plan and the Bicycle Plan and would reduce project impacts to bicycle facilities to less than significant.

Level of Significance

Potentially significant impact.

Mitigation Measures

MM TRANS-2 Prior to City acceptance of subdivision improvements for the nearest street connection into the project site (as specified) in connection with the relevant specific individual development proposal, the subject developer or City shall be responsible for ensuring the construction of the following bicycle facilities as outlined in the Chico Bicycle Plan 2019 Update (and as shown in Exhibit 3.16-6). To the extent that adequate funds exist for the City to design and construct off-site infrastructure improvements pursuant to a development agreement for the Barber Yard Specific Plan project it shall be the City's responsibility to design and construct the bicycle facilities listed below concurrently with the associated phase:

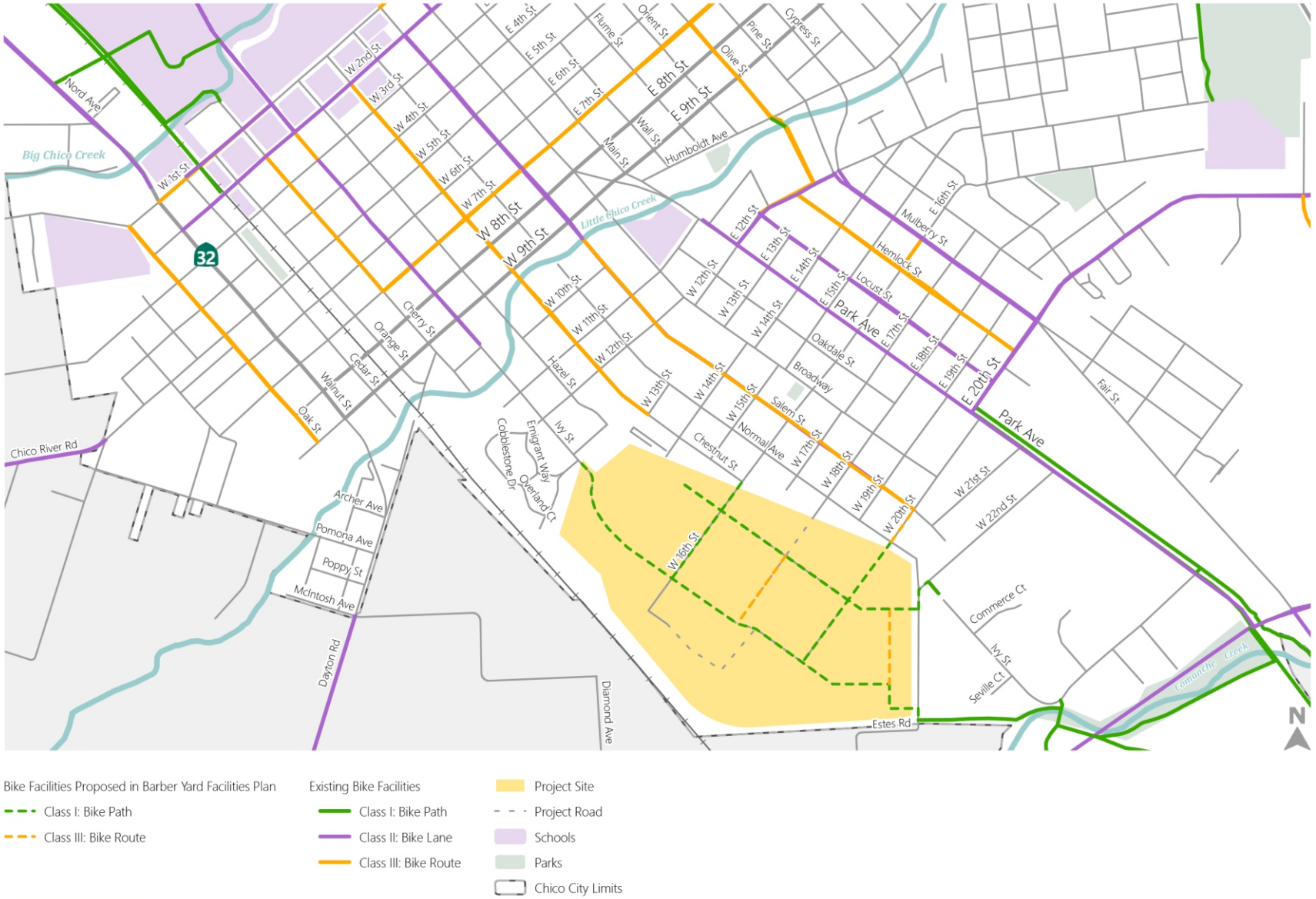
Class III Bike Boulevards:

- On Ivy Street from West 10th Street into the BYSP Area (Ivy Street)
- On Chestnut Street between West 13th Street and West 16th Street (West 16th Street)
- On West 16th Street from Salem Street to the BYSP Area (West 16th Street)
- On West 20th Street from Salem Street into the BYSP Area (West 20th Street)

Final maps shall not be approved for the subject phase until the relevant improvements are completed or bonded by inclusion in a City-approved subdivision improvement agreement.

Level of Significance After Mitigation

Less than significant impact.



Source: Fehr & Peers, 2024.

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Exhibit 3.16-6
Proposed Bicycle Facilities

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Pedestrian Facilities

Impact TRANS-3: The proposed project would generate substantial demand for pedestrian facilities on streets near the project site, which currently lack pedestrian facilities and which connect the project site to existing commercial uses in the vicinity, without including associated pedestrian infrastructure improvements, inconsistent with General Plan policies (CIRC-2.1, CIRC-2.2 and CIRC-4.2) contained in City of Chico planning documents.

The BYSP includes numerous objectives that support trip making by walking. Specifically, the BYSP seeks to:

- Improve transportation safety for all modes to encourage increased walking, bicycling, and public transit use.
- Cluster uses to encourage walkability.
- Accommodate the accessibility needs of all people. Public surfacing(s) must comply with all ADA and Title 24 requirements.
- Minimize conflicts between competing mobility modes on high-volume routes.

The General Plan Circulation Element identifies numerous policies aimed at creating complete streets and providing a safe, connected pedestrian network including Policy CIRC-2.1, which requires multimodal connections between new and existing neighborhoods for bicycles, automobiles and pedestrians; and Policy CIRC-4.2 to ensure that new projects provide a continuous pedestrian network in new and existing neighborhoods that facilitate convenient pedestrian travel free from major impediments and obstacles.

The proposed project would incorporate sidewalks and/or multiuse paths along all collector and residential streets within the BYSP Area. However, immediately outside of the BYSP Area, there are several major existing sidewalk gaps that would result in substandard pedestrian connectivity from the BYSP Area to commercial uses in the project vicinity, which, if left unmitigated, would result in the pedestrian network inconsistent with the City's policies. This is considered a significant impact. MM TRANS-3 would require the construction of sidewalks where gaps are present. Compliance with this mitigation measure would ensure connective pedestrian access would be provided in the BYSP Area vicinity and project impacts to pedestrian facilities would be reduced to a level that is considered less than significant.

Level of Significance

Potentially significant impact.

Mitigation Measures

MM TRANS-3 Prior to City acceptance of subdivision improvements for the specified street connection into the project site in connection with the relevant specific individual development proposal, the subject developer or City shall be responsible for ensuring the construction of sidewalks where gaps are present on West 16th Street between the project site and Broadway Street and on West 20th Street between the

project site and Broadway Street, in conjunction with the construction of subdivision improvements that extend each of those respective streets into the project site. To the extent that adequate funds exist for the City to design and construct off-site infrastructure improvements pursuant to a development agreement for the Barber Yard Specific Plan project it shall be the City's responsibility to design and construct the bicycle facilities listed below concurrently with the associated phase. Final maps shall not be approved for the phase which extends the specified street connection into the project site until the associated sidewalk gap improvements are completed or bonded by inclusion in a City-approved subdivision improvement agreement.

Level of Significance After Mitigation

Less than significant impact.

Transit Service and Facilities

Impact TRANS-4: The proposed project would generate demand for transit facilities but remain consistent with transit policies contained in the City of Chico General Plan, and thus would not conflict with any program, plan, ordinance or policy addressing public transit facilities.

B-Line receives funding from State sources (Transit Development Act [TDA] funds), federal sources (Federal Transportation Administration), and through fare collection. State and federal funds are generally allocated based on population, with a portion of TDA funds derived from a 0.25-cent general sales tax and a sales tax on diesel fuel. Therefore, development of the proposed project would increase funding for transit, through these sources, because of population growth. Butte Regional Transit's 2022/2023 operating budget identifies proposed non-operating revenue from State and federal sources totaling about $10.5 million.

The need to extend the B-Line to serve more areas accessible to the BYSP Area would be a function of demand and up to Butte Regional Transit as part of an evaluation of the overall transit system. As outlined above, transit routes near the proposed project generally have low demand and productivity. Therefore, excess seating and standing capacity would be available to accommodate the proposed project's residents, employees, and visitors.

To accommodate the potential extension of transit service to serve the proposed project, the BYSP includes objectives that would support and accommodate transit service. Specifically, the implementation of the BYSP would:

- Improve transportation safety for all modes to encourage increased walking, bicycling, and public transit use.
- Provide a more equitable and robust transportation system, both locally and regionally.
- Minimize conflicts between competing mobility modes on high-volume routes.

The BYSP proposes bus stops on Ivy Street near the health/fitness center, near the commercial spaces at Ivy Street and 16th Street, and on the edge of the BYSP Area on 16th Street, with final designs and locations to be determined in coordination with BCAG at the time of improvement.

Given its location along the Union Pacific rail line, the BYSP Area was identified by BCAG as a potential location for a passenger train station.[13] No formal public actions have been taken to reserve right-of-way or provide funding to construct this station and implement the related passenger rail service to Chico. Any potential future station would be part of a separate project pursued by the relevant public agencies and subject to separate environmental review. Details regarding the number of passengers that can be accommodated on each train, number of daily train trips, and the various rail destinations are not known at this time. As such, the potential for a passenger rail station in the BYSP and its potential impacts on the environment are too speculative to analyze in this Draft EIR. Nevertheless, in an effort to support this potential future public transit, the proposed project would agree to reserve approximately one acre of land for this purpose pursuant to the terms set forth in the Development Agreement.

The proposed project is designed to encourage and support access to transit, so it would not adversely affect public transit operations or fail to adequately provide access to transit, or otherwise conflict with any program, plan, ordinance or policy addressing public transit facilities. Therefore, this impact is considered less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Roadways

Impact TRANS-5:	**The proposed project would modify the baseline transportation system in a manner that would not substantially increase hazards due to a geometric design feature or incompatible uses.**

As described in Chapter 2, Project Description, the proposed project would create new roadway connections to the City's existing roadway network, including connections to Ivy Street and Chestnut Street to the west and 14th Street, 16th Street, 18th Street, and 20th Street to the north. The City's Code of Ordinances Title 18R–Design Criteria and Improvement Standards includes design criteria to ensure that residential subdivisions and non-subdivision public right-of-way and private street improvements are designed to meet or exceed uniform levels of sound engineering practice. The design criteria address speed, sight distance, minimum and maximum roadway grade, minimum curve radius, and lighting. As part of general engineering practice, all roadway facilities would also be

[13] North Valley Rail. 2024. The Project. Website: https://northvalleyrail.org/. Accessed December 16, 2024.

designed to meet applicable industry standards from the California Department of Transportation (Caltrans) Highway Design Manual (HDM), the California Manual on Uniform Traffic Control Devices (CAMUTCD), and the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets. Each development application would be subject to review and approval by the City, including the City's Fire Department which would include a review of the proposed project's consistency with the City's applicable design criteria to accommodate vehicle access, including for emergency vehicles.

While the proposed project would also increase the volume of traffic on study area roadways, the mix and speed of traffic is expected to remain substantially similar to baseline conditions although speeds may decline and delay may increase during peak periods (this issue is addressed in a separate analysis, see Appendix J, for information only and is not within the purview of CEQA). Therefore, this impact is considered less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Emergency Access

Impact TRANS-6: The proposed project would provide adequate emergency access, consistent with emergency policies in the City of Chico General Plan.

The proposed project would include direct roadway connections to Ivy Street and 16th Street as primary emergency access routes. Three proposed secondary emergency access locations would be provided in and out of the project site by way of the secondary streets of 14th Street, 18th Street, 20th Street, and a new connection to Estes Road. These roadway connections would provide adequate emergency ingress and egress to the project site.

The Chico Fire Department (CFD) maintains minimum requirements for emergency access, which include minimum roadway width and turning radii for fire apparatus. All roadways within the proposed project would be required to meet these standards. Each subdivision and building permit application would be subject to review and approval by the City, including CFD to ensure specific roadway design and access standards are met. The CFD reviewed the proposed project's conceptual circulation plan to ensure adequate access would be provided throughout the entire BYSP Area and would review all final circulation plans submitted as part of the application process for individual specific development proposals within the BYSP Area.

General Plan Action S-4.1.1 requiring the CFD to strive to obtain an initial response time of five and a half minutes or less for at least 90 percent of fire emergency calls in urbanized areas would be met for the proposed project. As discussed above, the closest CFD fire station (Station 1) to the proposed

project is located approximately 0.5-mile northwest of the project site on West 9th Street. Emergency response time from this station would be less than five minutes to access the project site. See Section 3.14 Public Services, for additional information in this regard.

Therefore, implementation of the proposed project would not result in inadequate emergency access and the impact is less than significant.

Level of Significance

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.16.6 - Cumulative Impacts

This analysis evaluates whether the impacts of the proposed project, together with the impacts of other cumulative development as identified in Chapter 3, could result in a cumulatively significant impact with respect to transportation. This analysis then considers whether incremental contribution of impacts associated with the implementation of the proposed project would be cumulatively considerable and thus significant. Both conditions must apply for the proposed project's cumulative effects to rise to the level of significance. The geographic context for this analysis includes the transportation study area as identified herein, and the City of Chico.

Vehicle Miles Traveled

As discussed in the OPR Technical Advisory, "A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less than significant project impact would imply a less than significant cumulative impact, and vice versa." As the characteristics of the proposed project, including location, land use diversity, and presence of medium high-density housing would go unchanged under the cumulative condition, cumulative VMT impacts would likely remain similar to baseline impacts.

The BYSP proposes development that is consistent with the land use diversity and multimodal transportation network of the study area. As the proposed project and the community develop over time, home-based VMT per resident and home-based work VMT per employee in the project vicinity are projected to decrease because the BYSP would provide complementary residential, commercial/retail, and recreational/open space uses in the City, thus decreasing VMT. In consideration of guidance in the OPR Technical Advisory, the proposed project was found to fall below VMT thresholds under the baseline condition, and thus a less than significant cumulative impact is determined.

Bicycle and Pedestrian

As described in the Bicycle and Pedestrian Impacts sections above, the proposed project, combined with other cumulative development, would include new residential and employment uses which would result in increased bicycle and pedestrian trips on local roadways. Similar to the dedicated bicycle and pedestrian facilities along these local roadways and the extensive active transportation network identified in the Chico Bicycle Master Plan that the proposed project would be required to provide, other cumulative developments would have comparable requirement, thereby helping to ensure future bicycle and pedestrian facilities would generally be capable of accommodating associated increases in bicycle and pedestrian demand. Therefore, this cumulative impact would be less than significant.

Moreover, the proposed project's contribution to this already less than significant impact would not be cumulatively considerable. As explained in detail above, the proposed project's infill location, land use mix, and higher density housing, combined with implementation of numerous BYSP policies to facilitate bicycle and pedestrian connectivity and implementation of identified mitigation measures, would ensure the proposed project's impact in this regard would be less than significant.

Transit

The proposed project, as well as other cumulative developments, would be required to assess their respective impact on public transit and mitigate accordingly; moreover, as noted above, the increased usage of public transit, in and of itself, should not typically be treated as a significant impact. Further, each development would be required to adhere to applicable General Plan provisions to help ensure reasonable access to public transit services, which currently have existing capacity to serve the proposed project as well as transit users from other cumulative developments. Therefore, this is a less than significant cumulative impact.

Moreover, the proposed project's contribution to this already less than significant impact would not be cumulatively considerable. As explained in detail above, the proposed project's infill location, land use mix, and higher density housing, combined with implementation of numerous BYSP policies to facilitate access to transit services (including potential new bus stops), would ensure the proposed project's impact in this regard would be less than significant. For example, the BYSP envisions enhancing access to public transit through several new bus stops and amenities on Ivy Street and 16th Street. The proposed project would not interfere with the right-of-way or potential design features of any reasonably foreseeable transit services or facilities. Therefore, this cumulative impact would be less than significant.

Roadways and Emergency Access

By the cumulative year of 2040, the proposed project and much of the adjacent Barber Neighborhood are expected to be at or close to full implementation. Modifications to the transportation network that occur over time from the proposed project and other cumulative development would be required to be consistent with applicable design standards and requirements, including, among others, those mandated by the Fire Code, and the anticipated changes in travel demand or behavior over time would have been accounted for in transportation

network planning that would further ensure adequate ingress and egress during emergencies. Therefore, this cumulative impact would be less than significant.

Moreover, the proposed project would not make a cumulatively considerable contribution to this already less than significant impact with respect to inadequate roadways or emergency access. It would be required to adhere to all applicable roadway and other standards imposed on the proposed project by the CFD and otherwise. Therefore, impacts would be less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

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3.17 - Utilities and Service Systems

3.17.1 - Introduction

This section describes the existing conditions with respect to utilities and service systems (water, wastewater, stormwater, and solid waste) in the City, County, and project site and vicinity as well as the relevant regulatory framework. This section also evaluates the potential impacts related to such utilities and service systems that could result from implementation of the proposed project. Information in this section is based on, in part, information provided by the City of Chico General Plan, California Water Service 2020 Urban Water Management Plan (2020 UWMP), Water Supply Assessment/Water Supply Verification (WSA/WSV) for the City of Chico Barber Yard Project completed by EKI Environment & Water, Inc. on behalf of the California Water Service (Cal Water) (Appendix K), and Sewer Generation Memorandum prepared by NorthStar (Appendix K). The following public comments were received during the Notice of Preparation (NOP) scoping period regarding utilities and service systems:

- Concerns related to utility systems and the impact on the City's water and sewer systems as a result of the proposed project.
- Concerns related to water usage and the ability of the City's water supply to serve the proposed project.
- Suggestion to use low water plantings and capture of grey water to irrigate landscaping.

3.17.2 - Environmental Setting

Water

Formed in 1926, Cal Water provides potable water services to the City, including the Barber Yard Specific Plan (BYSP) Area. Cal Water is the third largest regulated water utility company in the country,[1] servicing approximately 1.8 million people via 494,500 utility connections throughout 23 districts throughout the State of California.[2] The relevant district within Cal Water's service area is the Chico-Hamilton City District (District), which serves the City of Chico and Hamilton City. Two Public Water Systems (PWS) operate within the District: (1) the Chico PWS, which serves the BYSP Area and the rest of the City of Chico, and (2) the much-smaller Hamilton City PWS, which serves Hamilton City. The District's 2020 service area population was 109,723. Approximately 98 percent of this service population was served by the Chico PWS while the remaining 2 percent was served by the Hamilton City PWS. Cal Water anticipates the District's service population to increase to 134,347 in 2045, with the majority of growth occurring within the Chico PWS.

[1] California Water Service. 2024. Company Information. Website: https://www.calwater.com/about/company-information/. Accessed December 11, 2024.
[2] California Water Service. 2021. 2020 Urban Water Management Plan, Chico-Hamilton City District. Website: https://www.calwater.com/docs/uwmp2020/CH_2020_UWMP_FINAL.pdf. Accessed October 14, 2024.

Water service to the Chico portion of the District is provided via 68 wells, approximately 373 miles of pipelines, eight storage tanks and nine boost pumps. Water service to the Hamilton City portion of the District is provided by three wells and approximately 7.7 miles of pipelines.[3]

Water Source and Supply

As discussed in the WSA/WSV, the District has not historically used, and does not currently use, surface water as a source of supply for its service area. While current efforts are being pursued to evaluate the feasibility of bringing surface supplies to the District's service area in the future, Cal Water has no specific and firm plans to do so at this time. Accordingly, for purposes of this analysis and the WSA/WSV, surface water is not considered an available source of supply for the District's service area. Instead, its water supply comes exclusively from local groundwater. The District's service area overlays the Vina Subbasin and Corning Subbasin, both of the Sacramento Valley Basin, and groundwater used by the District is pumped from these two subbasins.[4] The Chico PWS lies entirely within the Vina Subbasin, which covers approximately 184,918 acres. In 2020, Cal Water pumped approximately 22,321-acre feet (AF) of water from the Vina Subbasin and approximately 346 AF from the Corning Subbasin for a total of approximately 22,667 AF of water. As noted above, the District operates a total of 68 wells, eight active ground-level storage tanks and four inactive elevated storage tanks, allowing storage of pumped water during non-peak demand periods to meet demand during peak-demand periods. According to the 2020 UWMP for Cal Water, the available groundwater supply has, historically, been sufficient to meet the District's demand.

As detailed more fully in the WSA/WSV, the groundwater pumping volumes for the Vina Subbasin in recent years are lower than they were in previous years, reflecting Cal Water's successful implementation of water conservation measures and continued efficiency due to passive conservation and demand hardening. From a regional or basin-wide perspective, it is notable that the Chico District pumping is only a small fraction of the total groundwater pumping within the Basin, the majority of which is for agricultural (rather than municipal and industrial) use.

Water Demand and Use

According to the 2020 UWMP, approximately 69 percent of water demand within the Chico District comes from residential uses and approximately 24 percent of demand is from nonresidential uses. The remaining approximately 7 percent of demand is attributed to distribution system losses. Table 3.17-1 below describes historic water demand by use type between 2016 and 2020.

[3] California Water Service. 2024. District Information. Website: https://www.calwater.com/district-information/?dist=ch. Accessed October 14, 2024.

[4] The Hamilton City portion of the District water system is physically separated from the Chico portion of the District and located within a different groundwater sub-basin. Thus, water supplies available to the Hamilton City portion of the District are not available to the Chico portion of the District and vice versa. Given this, the projected demands for the two portions of the District are presented separately, and this analysis, supported by the WSA/WSV, focuses primarily on the Chico portion of the District.

Table 3.17-1: Historic Demand for Potable and Nonpotable Water for Chico District (Both Chico and Hamilton Portions)

Use Type	Level of Treatment	Demand Volume (AFY)				
		2016	2017	2018	2019	2020
Single-Family	Drinking Water	9,186	10,632	11,058	10,943	12,527
Multi-Family	Drinking Water	2,521	2,732	2,728	2,780	3,013
Commercial	Drinking Water	3,680	4,197	4,287	4,413	4,509
Institutional/Government	Drinking Water	813	927	907	853	875
Industrial	Drinking Water	317	235	49	46	56
Other Potable	Drinking Water	200	83	138	164	38
Landscape1	Drinking Water	0	0	0	0	0
Losses2	Drinking Water	1,526	1,338	1,311	1,262	1,648
	Total	**18,244**	**20,143**	**20,478**	**20,462**	**22,667**

Notes:
AFY = acre-feet/year
[1] This use type is not tracked separately from other use types.
[2] Real and apparent losses
Source: California Water Service. 2021. 2020 Urban Water Management Plan. Chico-Hamilton City District. Website: https://www.calwater.com/docs/uwmp2020/CH_2020_UWMP_FINAL.pdf. Accessed October 14, 2024.

Demand projections account for: (1) demands for the existing service area and accounts; (2) projected growth based on population and employment estimates; and (3) all anticipated new development based on information currently available to Cal Water. As discussed above, Cal Water anticipates the District's service population to increase to approximately 134,347 in 2045. These growth projections (which include population and employment forecasts) are based off county-level forecasts prepared by the California Department of Transportation's long-term socio-economic forecast model for the existing District service area. Table 3.17-2 below details projected demands for potable and nonpotable water within the District service area (both Chico and Hamilton portions) by use type through 2045.

Table 3.17-2: Projected Demand for Potable and Nonpotable Water for Chico District (Both Chico and Hamilton Portions)

Use Type	Level of Treatment	Demand Volume (AFY)				
		2025	2030	2035	2040	2045
Single-Family	Drinking Water	13,158	14,099	14,753	15,047	15,252
Multi-Family	Drinking Water	3,139	3,299	3,493	3,616	3,702
Commercial	Drinking Water	4,564	4,701	4,832	4,889	4,929
Institutional/Government	Drinking Water	870	869	884	900	916

Use Type	Level of Treatment	Demand Volume (AFY)				
		2025	2030	2035	2040	2045
Industrial	Drinking Water	62	64	65	67	68
Other Potable	Drinking Water	39	39	39	39	39
Landscape[1]	Drinking Water	0	0	0	0	0
Losses[2]	Drinking Water	1,544	1,441	1,505	1,541	1,568
Total		**23,376**	**24,511**	**25,571**	**26,098**	**26,474**

Notes:
AFY = acre-feet/year
[1] This use type is not tracked separately from other use types
[2] Real and apparent losses
Source: California Water Service. 2021. 2020 Urban Water Management Plan. Chico-Hamilton City District. Website: https://www.calwater.com/docs/uwmp2020/CH_2020_UWMP_FINAL.pdf. Accessed October 14, 2024.

According to the 2020 UWMP and as detailed more fully in the WSA/WSV, the available groundwater supply is expected to be sufficient to meet the projected existing and future demands of the District in normal, dry, and multiple dry year periods through 2045.

Wastewater

The City of Chico provides wastewater (both treatment and conveyance) service to residential, commercial and industrial customers in the City (and lands within its Sphere of Influence [SOI]), including the BYSP Area. The City's wastewater system consists of sewer mains, trunk sewers, lift stations, and flow diversions which collect and divert wastewater to the City's Water Pollution Control Plant (WPCP).[5] The WPCP is located at 4827 Chico River Road, approximately 3.95 miles southwest of the BYSP Area. The WPCP has a current permitted capacity of 12 million gallons per day (MGD) with a potential for capacity to be expanded to 15 MGD in the future and is in compliance with applicable waste discharge requirements imposed pursuant to legal authority granted to the State Water Resources Control Board (SWRCB). Treated wastewater is discharged to the Sacramento River.[6]

The City's Sanitary Sewer Master Plan Update (Sanitary Sewer Master Plan), completed in 2013, calculated the Average Dry Weather Flow (ADWF) and the peak wet weather flow (PWWF) expected to occur within the City and its SOI at General Plan buildout. The Sanitary Sewer Master Plan evaluated the capacity of the City's sewer collection system, including gravity pipeline capacity and lift station capacity given projected PWWF. Table 6.2 of the Sanitary Sewer Master Plan identifies improvements, including new sewers and improvements to existing facilities, which, when fully

[5] City of Chico. 2013. Sanitary Sewer Master Plan Update. Website: https://chico.ca.us/sites/main/files/file-attachments/_ssmpufinal.pdf?1574726062. Accessed October 14, 2024.
[6] City of Chico. 2022. Water Pollution Control Plant. Website: https://chico.ca.us/post/water-pollution-control-plant. Accessed October 14, 2024.

implemented, would accommodate PWWF to the WPCP under full City General Plan buildout conditions.[7]

Sewer Fees

Chapter 15.36 (*Sewer Services and Fees*) of the Municipal Code details sewer service fees, WPCP capacity fees, trunkline capacity fees, lift station capacity fees, sewer main installation fees, and sewer lateral installation fees to be collected to fund the cost of constructing, installing, operating, and maintaining City sewer facilities.

Project Site

The Sanitary Sewer Master Plan identifies the BYSP Area as one of five Special Planning Areas (SPAs) and therefore has incorporated growth projections for the BYSP Area into service capacity assumptions, assigning an expected sewer flow for plant and sewer main sizing. Per the Sanitary Sewer Master Plan, the BYSP Area's SPA zone has an ADWF value of 1,200 gallons per day per acre (gpd/acre). As the BYSP Area is approximately 133 acres, the Sanitary Sewer Master Plan has assumed service to the BYSP Area, with a maximum allowable ADWF of 159,600 gpd.

Stormwater

Generation and Collection

Project Site

Storm drainage management within the City is provided by a system of developed and undeveloped collection systems operated and maintained by the City and the County. The developed storm drainage system consists primarily of drop inlets along the street system. Water in the system is transported to outfall locations along the major creeks, including Sycamore, Mud, Comanche, Big Chico, and Little Chico Creeks.[8]

The BYSP Area is generally clear of existing storm drainage features except for minor culverts and low swales that convey surface runoff to the southwest corner to a small retention basin (which would be removed as part of the proposed project). Existing storm drain lines run along the southern boundary of the BYSP Area and along Estes Road to the east of the BYSP Area.[9] Existing off property drainage features (within the off-site improvement area) include the existing ditch along the southern edge of the BYSP Area that drains a large culvert under the railroad tracks.

Storm Drainage Facility Fees

Chapter 3.85.405 (*Imposition of storm drainage fees*) of the Municipal Code details storm drainage facility fees to be imposed on new residential and nonresidential development within the City. Pursuant to applicable provisions in the City's Municipal Code, a credit against the storm drainage facility fees may be issued with the installation of off-site drainage facilities necessary to collect the

[7] City of Chico. 2013. Sanitary Sewer Master Plan Update. Website: https://chico.ca.us/sites/main/files/file-attachments/_ssmpufinal.pdf?1574726062. Accessed October 14, 2024.
[8] City of Chico. 2017. Chico 2023 General Plan. Park, Public Facilities, and Services Element.
[9] City of Chico. 2022. Sewer & Storm Drain Public Map. Website: https://chico.maps.arcgis.com/apps/instant/basic/index.html?appid=f452632c6d12470fb1c9f647f633d834. Accessed October 14, 2024.

stormwater runoff from the property, to transport runoff to a natural stream or an existing public drainage channel, or to detain and/or treat runoff and release it to a stream or drainage channel.

Solid Waste

On August 15, 2017, the Chico City Council approved a franchise agreement designating Waste Management (WM) as sole provider of solid waste services for residential customers in the City. WM provides weekly residential waste collection services for trash, green waste (compost) and recycling.[10] Commercial waste collection services are provided by WM and Recology. The BYSP Area falls within WM's commercial services area.[11] According to the General Plan, solid waste generated in the City is disposed of at the Neal Road Landfill, which is operated and owned by Butte County. The landfill is located approximately 5.26 miles southeast of the project site. The Neal Road Landfill has a maximum permitted throughput of 1,500 tons per day, and a maximum permitted capacity of 25,271,900 cubic yards. The facility has a closure date of January 1, 2048 and an estimated remaining capacity of 16,588,874 cubic yards as of 2020.[12] Green yard waste is hauled to the City's Compost Facility near the Chico Municipal Airport or the Neal Road Landfill.[13]

Electric Power, Natural Gas, and Telecommunications

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas services to residents and businesses within the City, including the BYSP Area. PG&E has provided a "Will Serve" letter to the proposed project for both electric and gas services. The City, including the BYSP Area, is currently served by Comcast for telecommunications. Overhead power lines are located adjacent to the project site, and existing PG&E gas lines are located south of the BYSP Area along Estes Road.[14]

3.17.3 - Regulatory Framework

Federal

Safe Drinking Water Act

The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (EPA) to establish national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water pursuant to the applicable standards to remove contaminants, except for private wells serving fewer than 25 people. In California, the State Department of Health Services conducts most enforcement activities in this regard.

[10] Waste Management (WM). 2022. Frequently Asked Questions. Website: https://www.wm.com/location/california/north-valley/chico/facts/index.jsp. Accessed October 14, 2024.
[11] Waste Management (WM). 2022. Commercial Zone Map. Website: https://www.wm.com/location/california/north-valley/chico/images/Split_April27-map-large.jpg. Accessed March 15, 2024.
[12] Butte County. 2023. General Plan Update Draft EIR, Public Review Draft. Section 5.17, Utilities and Service Systems. January.
[13] City of Chico. 2011. Chico 2030 General Plan, Chapter 9 Parks, Public Facilities, and Services.
[14] Pacific Gas and Electric Company (PG&E). Gas Systems. Website: https://www.pge.com/en/about/pge-systems/gas-systems.html#tabs-fc6b80548f-item-727cbee02b-tab. Accessed December 11, 2024.

Clean Water Act (National Pollutant Discharge Elimination System)

The Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the EPA implements pollution control programs and sets wastewater standards.

The National Pollutant Discharge Elimination System (NPDES) permit program was established within the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant. The City is mandated to comply with the NPDES Permit by applicable State and federal laws and regulations.

Energy Policy Act of 1992

The Federal Energy Regulatory Commission (FERC) regulates the transmission and sale of electricity in interstate commerce (including interstate gas pipelines that serve California), licensing of hydroelectric projects, and oversight of related environmental matters. As part of the license application process, environmental analysis pursuant to the National Environment Policy Act (NEPA) must be conducted. FERC acts under the legal authority of the Federal Power Act of 1935, the Public Utility Regulatory Policies, and the Energy Act of 1992, in addition to several other federal acts. The Energy Act of 1992 addresses energy efficiency, energy conservation and energy management, natural gas imports and exports, and alternative fuels (including as used in motor vehicles). It amended parts of the Federal Power Act of 1935.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act [RCRA], Subtitle D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria.

State

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), which was passed in California in 1969, the State Water Resources Control Board (State Water Board) has the ultimate authority over State water rights and water quality policy. Porter-Cologne also establishes nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day to-day basis at the local and regional level. The RWQCBs engage in a number of water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. The Central Valley RWQCB covers the City.

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610–10656) requires that all urban water suppliers with at least 3,000 customers prepare UWMPs and update them every 5 years. The act requires that, among other things, UWMPs include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, UWMPs must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures; and
- Assess the water supply reliability.

California Health and Safety Code

Section 64562 of the California Health and Safety Code establishes water supply requirements for service connections to PWSs. Before additional service connections can be permitted, enough water must be available to the PWS from its water sources and distribution reservoirs to adequately, dependably, and safely meet the total requirements of all water users under maximum-demand conditions.

Assembly Bill 715

Assembly Bill (AB) 715, enacted in 2007, requires that any toilet or urinal sold or installed in California on or after January 1, 2014, cannot have a flush rating exceeding 1.28 and 0.5 gallons per flush, respectively. AB 715 superseded the State's previous standards for toilet and urinal water use set in 1991 of 1.6 and 1.0 gallons per flush, respectively. On April 8, 2015, in response to the Governor's Emergency Drought Response Executive Order (Executive Order B-29-15), the California Energy Commission approved new standards for urinals requiring that they not consume more than 0.125 gallons per flush, 75 percent less than the standard set by AB 715.

California Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221 (Water Code § 10910(c)(2)) amended State law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use

decisions made by cities and counties. SB 610 and SB 221 seek to promote more collaborative planning between local water suppliers and cities and counties by requiring that detailed information regarding water availability be provided to decision-makers prior to approval of specified large development projects. SB 610 requires that detailed information be included in a water supply assessment (WSA), which is then included in the CEQA administrative record that serves as the evidentiary basis for CEQA compliance in connection with an approval action by a city or county. SB 221 requires that the detailed information be included in a verification of water supply for qualifying residential subdivisions, typically imposed as a condition to the relevant tentative subdivision map. Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code Section 10912(a)) subject to requirements under CEQA.

California Water Conservation Act

The California Water Conservation Act (SB X7-7) was enacted in November 2009 and requires each urban water supplier to select one of four water conservation targets contained in California Water Code Section 10608.20 with the statewide goal of achieving a 20 percent reduction in urban per capita water use by 2020. Under SBX7-7, urban retail water suppliers are required to develop water use targets and submit a water management plan to the Department of Water Resources by July 2011. The plan must include the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.

California Model Water Efficient Landscape Ordinance

The California Model Water Efficient Landscape Ordinance was adopted by the California Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into its own code requirements for landscaping. The City has adopted such as local ordinance, codified under Chico Municipal Code Section 19.68.070.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent in 1995 and 50 percent in 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, amendments to the California Integrated Waste Management Act introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Senate Bill 407

SB 407, enacted in 2009, mandates that all existing buildings in California come up to current State plumbing fixture standards within this decade. This law establishes requirements that residential and commercial property built and available for use on or before January 1, 1994, replace plumbing fixtures that are not water conserving, defined as "noncompliant plumbing fixtures." This law also requires a seller or transferor of single-family residential property show to the purchaser or transferee, in writing, the specified requirements for replacing plumbing fixtures and whether the real property includes noncompliant plumbing. Similar disclosure requirements went into effect for multi-family and commercial transactions on January 1, 2019. SB 837, passed in 2011, reinforces the disclosure requirement by amending the statutorily required transfer disclosure statement to include disclosure about whether the property follows SB 407 requirements.

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater (recycled water) and sets forth water quality standards related thereto. In most cases, only disinfected tertiary water may be used on food crops where recycled water would encounter the edible portion of a crop. Disinfected secondary treatment may be used for food crops where the edible portion is produced below ground and will not encounter secondary effluent. Lesser levels of treatment are required for other types of crops, such as orchards, vineyards, and fiber crops.

General Waste Discharge Requirement

On May 2, 2006, the State Water Board adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The Order provides a consistent Statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the State Water Board using an online reporting system. The SWRCB delegated authority to its nine RWQCBs to enforce these requirements.

Assembly Bill 341

The purpose of AB 341 is to reduce greenhouse gas (GHG) emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. In addition to Mandatory Commercial Recycling, AB 341 sets a Statewide goal for 75 percent disposal reduction by the year 2020.

California Integrated Waste Management Act

Assembly Bill 939 AB 939 (Public Resources Code [PRC] § 41780) requires cities and counties to prepare Integrated Waste Management Plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of the Integrated Waste Management Plan (IWMP). These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill 1016

SB 1016 builds on AB 939 compliance requirements by requiring that the 50 percent solid waste diversion be measured in terms of per capita disposal expressed as pounds per person per day. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor. Every year CalRecycle calculates each jurisdiction's per capita (per resident and per employee) disposal rates and reviews jurisdiction compliance on a case-by-case basis. Jurisdictions are not compared to other jurisdictions or the Statewide average but compared to their own 50 percent per capita disposal target.

Senate Bill 1383

SB 1383 was signed in September 2016 to reduce emissions of short-lived climate pollutants. As it pertains to CalRecycle, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the Statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food16 is recovered for human consumption by 2025.17 SB 1383 further supports California's efforts to achieve the Statewide 75 percent recycling goal by 2020 established in AB 341.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customer safety, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

California Code of Regulations Title 24

Part 6 (Energy Efficiency Standards for Residential and Nonresidential Buildings)

California Code of Regulations Title 24 Part 6 (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficient technologies and methods and are now considered some of the most stringent in the nation. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2022 Building Energy Efficiency Standards went into effect on January 1, 2023.[19]

Part 11 (California Green Building Standards Code)

California Code of Regulations Title 24, Part 11, is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went into effect January 1, 2011. The code is updated on a regular basis with requirements that are now considered some of the most stringent in the nation, with the most recent update consisting of the 2019 California Green Building Standards Code (CALGreen) that became effective January 1, 2020.[20] Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. The code

recognizes that many jurisdictions have existing construction and demolition ordinances and defers to them as the ruling guidance if they provide a minimum 50 percent waste diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The California Building Standards Code (CBC) provides the minimum standard that buildings must meet to be certified for occupancy, which is enforced by the local building or planning departments with jurisdiction over the subject building.

Solid Waste Reuse and Recycling Act

The Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. The Solid Waste Reuse and Recycling Access Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own to govern adequate areas in development projects for collection and loading of recyclable materials.

Local

City of Chico

General Plan

The Chico 2030 General Plan establishes the following goals and policies relevant to this utilities and service systems analysis:

Sustainability Element

Goal SUS-5 Increase energy efficiency and reduce nonrenewable energy and resource consumption Citywide.

Policy SUS-5.2 (Energy Efficient Design)–Support the inclusion of energy efficient design and renewable energy technologies in public and private projects.

Action SUS-5.2.1 (Integration of Energy Efficiency Technology)–Utilize City incentives identified in Action LU-2.3.1 to encourage the integration of energy efficiency measures and renewable energy devices, in addition to those required by the State, during early project review.

Goal SUS-3 Lead the way to a sustainable Chico by reducing the environmental impacts of City operations.

Policy SUS-3.3 **(Municipal Waste Reduction):** Reduce consumption and increase recycling and reuse of materials in City operations.

Parks, Public Facilities, and Services Element

Goal PPFS-4 Maintain a sanitary sewer system that meets the City's existing and future needs, complies with all applicable regulations, and protects the underlying aquifer.

Policy PPFS-4.1 **(Sanitary Sewer System):** Improve and expand the sanitary sewer system as necessary to accommodate the needs of existing and future development.

Policy PPFS-4.2 **(Protection of Groundwater Resources):** Protect the quality and quantity of groundwater resources, including those that serve existing private wells, from contamination by septic systems.

Policy PPFS-4.4 **(Wastewater Flows):** Ensure that total flows are effectively managed within the overall capacity of the Water Pollution Control Plant.

Goal PPFS-5 Maintain a sustainable supply of high quality water, delivered through an efficient water system to support Chico's existing and future population, including fire suppression efforts.

Policy PPFS-5.1 **(Protect Aquifer Resources):** Protect the quality and capacity of the upper and lower Tuscan and Tehama aquifers underlying the Chico Planning Area.

Policy PPFS-5.2 **(Future Water System):** Consult with Cal Water to ensure that its water system will serve the City's long-term needs and that State regulations SB 610 and SB 221 are met.

Goal PPFS-6 Provide a comprehensive and functional stormwater management system that protects people, property, water quality, and natural aquifers.

Policy PPFS 6.2 **(Stormwater Drainage):** Continue to implement a stormwater drainage system that results in no net increase in runoff.

Policy PPFS-6.3 **(Stormwater Drainage BMPs):** To protect and improve water quality, require the use of Best Management Practices for stormwater drainage infrastructure suited to the location and development circumstances.

Policy PPFS-6.4 **(Water Runoff):** Protect the quality and quantity of water runoff that enters surface waters and recharges the aquifer.

Goal PPFS-8 Ensure that solid waste and recyclable collection services are available to City residents.

Policy PPFS-8.1 **(Waste Recycling):** Provide solid waste collection services that meet or exceed State requirements for source reduction, diversion, and recycling.

Community Design Element

Goal H.7 Encourage energy efficiency in housing.

Policy H.7.1 Continue to enforce energy standards required by the State Energy Building Regulations and California Building Code, and reduce long-term housing costs through planning and applying energy conservation measures.

California Water Service Urban Water Management Plan

The California Water Service's 2020 Urban Water Management Plan for the Chico-Hamilton City District is a foundational document and source of information about the District's historical and project water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. Among other things, it is used as a long-range planning document for water supply and system planning, and as a source of data for population, housing water demands, water supplies, and capital improvement projects.

3.17.4 - Methodology

Descriptions and analysis in this section are based on, in part, information provided by the Cal Water, City of Chico Public Works Department, California Department of Resources Recovery and Recycling, and PG&E, as well as the WSA/WSV prepared on behalf of Cal Water and the Sewer Generation Memorandum prepared for the proposed project (Appendix K).

3.17.5 - Thresholds of Significance

The City, as the lead agency, in its discretion has decided to utilize the criteria in CEQA Guidelines Appendix G Environmental Checklist to determine whether impacts to utilities and service systems are significant environmental effects. Would the proposed project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, State, and local statutes and regulations related to solid waste?

3.17.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides feasible mitigation measures where appropriate.

Water Service or Wastewater Treatment Facilities

Impact UTIL-1:	**The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Impact Analysis

Water

According to the BYSP, water service to the proposed project would be provided via a conventional on-site water system with mains, services, and fire hydrants designed in accordance with applicable City and Cal Water requirements. Various existing water lines are present on-site. However, current on-site water use is minimal and primarily related to the existing on-site indoor recreational vehicle (RV) storage operation; this usage is subtracted from the proposed project's demand figures.

In February of 2024, a WSA/WSV was performed for the proposed project by EKI Environment & Water, Inc. on behalf of Cal Water (Appendix K). The WSA/WSV assessed water usage for the proposed project (including assumed development of a total of 1,250 residential units (632 single-family units and 618 multi-family units), approximately 4.8 acres of commercial land uses (assumed maximum of 210,000 sf), and approximately 43 acres of related landscaping (including recreational and open space uses. As discussed more fully in the WSA/WSV, the proposed project's single-family residential units are estimated to use a total of approximately 381 gallons per day per dwelling unit (gpd/du) and multi-family residential units are expected to use a total of approximately 108 gpd/du for a total of approximately 345 acre feet per year (AFY) attributable to residential uses at project buildout. Proposed commercial uses and landscaping uses are expected to account for a total of approximately 7.6 AFY and 125 AFY, respectively.[15] Using the water demand factors (which account for both indoor and outdoor use) relied upon in the WSA/WSV of 381 gpd/du for single-family residential units and 0.035 gpd/square feet for commercial uses, the revised water demand associated with the proposed project in 2045 at full buildout is conservatively estimated to be 425,893 gpd or approximately 510 AFY.[16] This represents only approximately 1.99 percent of the 25,571 AF of water demand in 2035 estimated by the 2020 UWMP.

According to the 2020 UWMP [17]and the WSA/WSV, water supply is expected to be sufficient to meet the projected existing and planned future demands, including the proposed project, in normal, dry, and multiple dry year periods through 2045. Future water demand associated with the proposed project is within the projected water demand growth detailed in the 2020 UWMP (Table 3.17-2). To service this demand, the proposed project is anticipated to utilize approximately 0.18 percent of the total pumping volume in the Basin. As such, the adopted WSA/WSV concluded that Cal Water has sufficient water supplies to meet anticipated demand attributable to the proposed project as well as other existing and planned growth in the entire District service area.

With respect to water facilities (e.g., conveyance) to serve the proposed project, the proposed water improvements for the BYSP Area consist of a conventional on-site water system with mains, services, and fire hydrants designed in accordance with applicable City of Chico and Cal Water requirements.

[15] A portion of this water is returned to the groundwater basin via groundwater recharge; however, for the purpose of a conservative analysis, this additional amount that would return to the groundwater basin is not deducted from demand figures. Also, unaccounted for losses are included in the proposed project's demand figures.

[16] (381 gpd/du * 632 du) + (618 gpd/du * 108 du) + (40,000 sf * 0.032 gpd/sf) + (22,800 sf * 0.068 gpd/sf) * (130,000 sf * 0.021 gpd/sf) + (125 AFY * 326,851 gal/AF * 365 days/year) = 425,893 gpd

[17] As detailed in the WSA/WSV, while the proposed project is not explicitly included in the Caltrans forecasts referenced herein, Cal Water has determined, based on review of available data and other materials, the water demand associated with the proposed project is within the anticipated growth of the Chico District.

Water connections would be made at all abutting City streets including Ivy Street, West 14th Street, West 16th Street, West 18th Street, and West 20th Street.

Therefore, the proposed project would not require or result in the relocation or construction of new or expanded water service facilities and impacts would be less than significant.

Wastewater

The City would provide wastewater collection and treatment services to the proposed project. As discussed above, the City's Sanitary Sewer Master Plan concluded that with implementation of certain identified improvements, including new sewers and improvements to existing facilities, the WPCP would accommodate PWWF under full General Plan buildout conditions. However, no such off-site improvements would be necessary specifically to serve the proposed project. The Sanitary Sewer Master Plan relied on land use types within the City when estimating future generation of wastewater at buildout, and the land use assumptions, including SPAs (which includes the BYSP Area), in the Sanitary Sewer Master Plan were based on the General Plan. As discussed in Section 3.11, Land Use, the BYSP Area is designated as SPA-2 – Barber Yard by the General Plan. This designation identifies areas for significant new growth to be developed with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. The proposed project is consistent with the land use designation specified in the General Plan. Therefore, the future generation of wastewater estimated in the Sanitary Sewer Master Plan takes into account wastewater generation associated with the BYSP Area land use designation of SPA-2, and thus the proposed project is appropriately accounted for in terms of capacity and future service provision by the City. As noted above, the relevant SPA zone has an ADWF value of 1,200 gpd/acre. As the BYSP Area is approximately 133 acres it therefore has a maximum allowable ADWF of 159,600 gpd. At buildout, the proposed project is anticipated to have, in total, an ADWF of approximately 154,650 gpd, which is slightly below the maximum allowable ADWF. Table 3.17-3 below details the ADWF for each land use category associated with the proposed project.

Table 3.17-3: Anticipated Wastewater Generation for the Proposed Project

Land Use Category	Approximate Gross Acreage	ADWF Coefficient (gpd/acre)	Buildout ADWF (gpd) (approximate)
Medium Density Residential	81	1,050	85,050
Medium-High Density Residential	27	2,000	54,000
Residential Mixed Use	13	1,200	15,600
Open Space	12	0	0
Total	**133**	**1,163**	**154,650**
2013 Sewer Master Plan Allotment	**133**	**1,200**	**159,600**

Notes:
ADWF = Average Dry Weather Flow
Source: Northstar Environmental Group, Inc. 2022. Barber Yard Sewer Generation Memo (Specific Plan Separate Support). April 8.

As shown in the table above, at full buildout, the proposed project is anticipated to generate a total of approximately 154,650 gpd of wastewater. This falls within the maximum allowable ADWF, representing approximately 97 percent of the 159,600 gpd allocated by the Sanitary Sewer Master Plan for the BYSP Area. Therefore, wastewater generated by the proposed project would not exceed the levels allotted and the proposed project would be able to be served by the City, as planned and in compliance with the Sanitary Sewer Master Plan. Furthermore, the proposed project would be required to comply with the payment of applicable sewer service fees as detailed in Chapter 15.36 Sewer Services and Fees of the Municipal Code. Such fees would, when combined with impact fees from other developments, would help to ensure that the installation, operation, and maintenance of sewer facilities keep pace with development in the City's wastewater service area as envisioned under the Sanitary Sewer Master Plan.

Therefore, the proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities and impacts in this regard would be less than significant.

Stormwater

Implementation of the proposed project would result in a significant increase in impervious surface on the project site, which would increase the amount of stormwater runoff from the project site as compared to existing conditions. The BYSP Area is designated as its own separate drainage basin and is tributary to Comanche Creek. The proposed project would include a new storm drainage system and retention/detention basin. The storm drain system and basin would be connected via a storm drain alignment to Comanche Creek. Since there are two potential alignments, for purposes of a conservative analysis, this Draft Environmental Impact Report (Draft EIR) considers the potential impacts associated with both such alignments, although only one would ultimately be used to serve the proposed project.

The storm drainage system would collect and convey runoff from the proposed project to an approximately 4.09-acre off-site stormwater detention pond directly south of the BYSP Area, on Assessor's Parcel Number (APN) 039-410-025 (within the off-site improvement area). The proposed storm drain system for the proposed project would consist of a conventional off-site storm drain system with mains, catch basins, and maintenance holes designed in accordance with the Storm Drainage Master Plan (SDMP) and other applicable City design standards and requirements.

The proposed off-site combination retention/detention basin would be located outside of the City's boundaries and within unincorporated Butte County. The basin would be designed to retain and infiltrate or treat runoff from two-year storms, as well as detain and meter the release of runoff from ten-year and 100-year storms, per the County's standards and other requirements under applicable laws and regulations, into Comanche Creek to the south.

Impacts associated with construction of the proposed retention/detention basin have been analyzed throughout this Draft EIR. Although impacts during construction would be temporary in nature, there is potential for construction of the retention/detention basin and outfall to impact habitat for special-status species. As described in Section 3.3, Biological Resources, construction of the outfall could result in impacts to Valley Elderberry Longhorn Beetle (VELB), giant garter snake, and western

pond turtle. Mitigation Measure (MM) BIO-3a, MM BIO-3b, MM BIO-3c, MM BIO-4, and MM BIO-5 would be required to reduce impacts related to these special-status species.

Furthermore, the storm drainage system would be required to be designed in accordance with all applicable standards and requirements, including those set the City's SDMP. Additionally, (as discussed in Section 3.10 Hydrology and Water Quality of this Draft EIR) the proposed project would be required to comply with C.3 requirements in the NPDES permit governing discharges, which includes implementation of a Storm Water Management Plan (SWMP) applicable to the proposed project's design and post-project operation and maintenance. The storm drain system, basin, and creek outfall would be sized specifically for stormwater produced by the proposed project and has been considered throughout this Draft EIR.

Compliance with the SDMP and other applicable City and County design standards and requirements would reduce potential impacts associated with the construction of new stormwater facilities. The impact would be less than significant.

Electric Power, Natural Gas, or Telecommunications

As discussed above, PG&E provides gas and electric services to the City and has issued a "Will Serve" letter for the proposed project. A proposed electrical system, including underground conduits, wires, above-ground transformers, and other miscellaneous vaults, would connect to the existing facilities to the northwest and northeast of the project site (at Ivy and West 16th streets). With respect to telecommunications facilities, the BYSP Area is currently served by Comcast.

Pursuant to MM ENER-1, the proposed project's use of natural gas would be significantly constrained, thereby minimizing the amount of any infrastructure/service needs in this regard.

As discussed in the BYSP, and as would be detailed during the subsequent entitlement process for specific individual development proposals, it is anticipated that the above mentioned on-site improvements would need to be installed to provide dry utility service to the proposed project; the potential environmental impacts of doing so have been studied and disclosed in the relevant environmental topic areas throughout this Draft EIR. Therefore, impacts in this regard would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Water Supplies

Impact UTIL-2: **There would be sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry and multiple dry years.**

Impact Analysis

Cal Water would provide water services to the proposed project. The Chico District of Cal Water, in which the project site is located, receives its water supply exclusively from groundwater, as explained above and in more detail in the WSA/WSV. As discussed above under Impact UTIL-1, using water demand coefficients outlined in the WSA/WSV and consistent with the 2020 UWMP, at full buildout, the proposed project's annual water demand has been conservatively estimated to be approximately 425,893 gpd (or a total of approximately 510 AFY). This represents merely approximately 1.99 percent of the 25,571 AF of water demand in 2035 estimated by the 2020 UWMP.[18] According to the 2020 UWMP, water supply is expected to be sufficient to meet the existing and projected future demands, including those associated with the proposed project, in normal, dry, and multiple dry year periods through 2045. Future water demand associated with the proposed project is within the projected water demand growth detailed in the 2020 UWMP (Table 3.17-2). As such, the WSA/WSV concluded that Cal Water has sufficient water supplies to meet anticipated demand attributable to the proposed project as well as the entire District service area.

Therefore, the proposed project would have sufficient water supplies to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts in this regard would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Wastewater Collection and Treatment Capacity

Impact UTIL-3: **The proposed project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

Impact Analysis

As discussed above and detailed in Impact UTIL-1, the City would provide wastewater collection and treatment services for the proposed project. The on-site sewer improvements proposed as part of the proposed project consist of a conventional on-site gravity sanitary sewer system with mains,

[18] 541/25,571= 2.12%

manholes, and laterals, which would be designed in accordance with applicable City design standards and other applicable laws and regulations. Wastewater generated by the proposed project would be collected via the on-site sewer mains and directed south to the existing 33-inch sewer main on the southern edge of the BYSP Area within the decommission Union Pacific Railroad (UPRR) spur before being conveyed to the WPCP for treatment. The WPCP, which treats the City's wastewater, has a 12 MGD capacity and can be expanded to 15 MGD in the future. The Barber Yard Sewer Generation Memo indicates the ADWF for the proposed project would be 154,650 gallons per day, and therefore there would be sufficient capacity to serve the proposed project without triggering the need for any additional improvements. General Plan buildout conditions assessed in the Sanitary Sewer Master Plan are based on land use types detailed in the General Plan, including areas with land use designations of the relevant SPA that covers the BYSP Area. As noted above, the SPA-2 zone has an ADWF value of 1,200 gpd/acre. As the BYSP Area is approximately 133 acres it therefore has a maximum allowable ADWF of 159,600 gpd. At buildout, the proposed project is anticipated to have an ADWF of a total of approximately 154,650 gpd (Table 3.17-3). Therefore, wastewater generated by the proposed project would be within the allocation planned for (in fact, slightly less than what is allotted) in the Sanitary Sewer Master Plan. Thus, the City's wastewater service system would have sufficient capacity to serve the proposed project.

Furthermore, as discussed above, the proposed project would pay the applicable sewer service fees as detailed in Chapter 15.36 Sewer Services and Fees of the Municipal Code; this funding, combined with impact fees from other developments collected over time, would be available to the City to fund the installation of the planned improvements identified to serve the City's General Plan buildout pursuant to the Sanitary Sewer Master Plan, thereby further ensuring that sewer facilities can adequately accommodate development in the City's wastewater service area. Therefore, the proposed project would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the proposed project and impacts in this regard would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Attainment of Solid Waste Reduction Goals

Impact UTIL-4:	**The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.**

Impact Analysis

Implementation of the proposed project would introduce additional residential, commercial and recreational uses that would increase the amount of solid waste generated by residents, businesses and visitors compared to existing conditions. As discussed above, WM is the sole provider of solid waste services for residential customers in the City. The BYSP Area is also within WM's commercial waste service area. According to the California Department of Resources Recycling and Recovery (CalRecycle), commercial uses produce between 5 and 25 pounds of waste per 1000 square feet per day and residential uses produce up to 12.23 pounds per household per day.[19] The estimated solid waste generated by the proposed project is described below in Table 3.17-4. In total, the proposed project, at full buildout, is estimated to produce between approximately 8.17 and 10.26 tons of solid waste per day.

Table 3.17-4: Anticipated Solid Waste Generation for the Proposed Project

Proposed Use	Generation Rate[1]	Estimated Project Generation (approximate)
Commercial[2]	5–25 lbs/1,000 square feet/day	0.525–2.62 tons/day
Residential[3]	12.23 pounds/du/day	7.64 tons/day
	Total	**8.16–10.26 tons/day**

Notes:
1 California Department of Resources Recycling and Recovery (CalRecycle). 2019. Estimated Solid Waste Generation Rates. Website: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed October 7, 2024.
2 (210,000 square feet * 5 pounds/1,000 square feet = 1,050 pounds =), (210,000 square feet * 25 pounds/1,000 square feet = 5,250,000 pounds = 5,250 pounds)
3 1,250 units * 12.23 pounds = 15,287 pounds = 7.6435 tons

As discussed above, solid waste generated in the City is disposed of at the Neal Road Landfill, which is operated and owned by Butte County. The Neal Road Landfill maximum permitted throughput of 1,500 tons per day, and a maximum permitted capacity of 25,271,900 cubic yards. The facility has a closure date of January 1, 2048, and an estimated remaining capacity of 16,588,874 cubic yards as of 2020.[20] Based on the calculations herein that reflect appropriate assumptions, the proposed project would contribute a nominal increase in waste production between approximately 0.54 and 0.68 percent of the Neal Road Landfill's maximum permitted daily throughput; this increase would be negligible. Estimating a span of over 10 years, and utilizing 10.26 tons per day at full buildout for a conservative estimate, the proposed project would need to use approximately 1.05 percent remaining available capacity.[21] The values detailed in this analysis represent a conservative estimate of the solid waste generation that would be expected to occur from the proposed project. Additionally, WM provides recycling and green waste collection to customers, which further diverts material from the waste stream; furthermore, the proposed project would be required to adhere to

[19] California Department of Resources Recycling and Recovery (CalRecycle). 2019. Estimated Solid Waste Generation Rates. Website: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates. Accessed October 7, 2024.
[20] Butte County. 2023. General Plan Update Draft EIR, Public Review Draft. Section 5.17, Utilities and Service Systems. January.
[21] 10.26 tons per day x 365 days x 10 years = 37,449 tons. 37,449 tons x 2,000 = 74,898,000 lbs. 74,898,000 pounds / 300 = 246,660 cubic yards. Assuming a municipal solid waste weight of 300 pounds per cubic yard as indicated by CalRecycle. (2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California. September 10, 2015.)

all applicable City requirements and other standards to facilitate efficient handling of its solid waste. Therefore, impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Solid Waste Regulations

Impact UTIL-5: The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.

Impact Analysis

As discussed above, implementation of the proposed project would increase the amount of solid waste generated by residents, businesses, and visitors as compared to existing conditions. Construction and operational activities associated with implementation of the proposed project that generate solid waste would be required to be handled, transported, and disposed of in accordance with applicable federal, State, and local laws and regulations pertaining to municipal waste, and as discussed more fully in Section 3.9, Hazards and Hazardous Materials, of this Draft EIR. The City currently has a number of regulations and policies that require or promote recycling and waste reduction, as discussed more fully above. Because the proposed project would be required to comply with all applicable laws and regulations related to solid waste, and given the available landfill capacity, the proposed project would not include any activities or components that would conflict with federal, State, or local statutes or regulations related to solid waste. Solid waste disposal service impacts would be less than significant upon compliance with applicable regulatory requirements and proposed policies for full implementation of the proposed project. Therefore, impacts in this regard would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

3.17.7 - Cumulative Impacts

The geographic context for evaluation of cumulative impacts related to utility and service systems varies for the different utility providers and is specified below for each utility, based on each provider's respective service area.

The proposed project, combined with other cumulative development (past, present, and reasonably foreseeable future) in the relevant geographic context would result in an increase in demand for water, wastewater treatment and collection, stormwater capacity, landfill capacity, and energy facilities to adequate serve the same. However, cumulative development occurring within the relevant geographical area, combined with the proposed project, would not result in significant adverse cumulative impacts to the physical capacity, service levels, or funding available because demand projections for these utilities and service systems have taken Citywide growth into consideration and planned accordingly with respect to infrastructure and improvements that can accommodate cumulative growth. For example, Cal Water has adopted a 2020 UWMP that forecasted increases in water demand through to 2045 based on estimated existing future population and employment forecasts and related and water usage projections; and the City has adopted Master Plans (addressing sanitary sewer and storm drainage) that forecasted increases in wastewater and storm drainage service demand to serve full City General Plan buildout and have sufficient capacity based on existing and planned improvements and infrastructure to serve this demand. Additionally, cumulative development, along with the proposed project, has been, and would continue to be, required to adhere to all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, and would be required to demonstrate that sufficient capacity is available and provided by existing and/or planned future infrastructure prior to approval of each subject development, and/or each subject development would be required to construct or pay the identified fair share toward any needed upgrades if existing systems are insufficient. For these reasons and as discussed in more detail below, with respect to cumulative utility and service system impacts, these would be a less than significant in all respects.

Water

The geographic context for cumulative impacts regarding water supply and water treatment and distribution system infrastructure is the Chico portion of the Chico District of Cal Water. The 2020 UWMP concluded that there is sufficient supply to meet expected demand throughout Cal Water's service area (including the Chico District) out to 2045 projections. Demand projections are based off anticipated growth in the District's service population to 134,347 in 2045. These growth projections are based off county-level forecasts prepared by the California Department of Transportation and therefore take into account future development, including the proposed project and other cumulative development. Additionally, cumulative development, along with the proposed project, has been, and would continue to be, required to adhere to all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, and to consider and evaluate any identified impacts related to the provision of water service as well as pay applicable impact fees. Therefore, cumulative impacts, in this regard, are anticipated to be less than significant.

Moreover, with respect to the proposed project's contribution to this already less than significant impact, as discussed above, the proposed project's demand at full buildout would represent a nominal approximately 1.99 percent of the 2035 water demand projected by and planned for in the 2020 UWMP. This demand, in addition to other cumulative development, could be adequately served by Cal Water's available supplies (as detailed in the WSA/WSV). Moreover, the proposed project would pay all applicable impact and connection fees and install the necessary on-site improvements to allow for water service as envisioned under the 2020 UWMP. Therefore, the proposed project's contribution would not be cumulatively considerable, and the proposed project would result in a less than significant cumulative environmental impact.

Wastewater

The appropriate geographical context for cumulative impacts regarding wastewater is the City of Chico's service area. With full buildout of the City's General Plan, there would be an increased demand for wastewater services. However, as discussed in detail therein and above, the City's Sanitary Sewer Master Plan has adequately accounted for this increased demand in terms of existing and future planned infrastructure and improvements needed to service full buildout. Additionally, cumulative development, along with the proposed project, has been, and would continue to be, required to adhere to, all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, and to consider and evaluate any identified impacts related to the provision of wastewater service as well as pay applicable impact fees. For these reasons, there would be less than significant cumulative impacts in this regard.

With respect to the proposed project's contribution to this already less than significant cumulative impact, as discussed above, there would be an increase in baseline wastewater generation with implementation of the proposed, as compared to existing conditions. However, the proposed project's demand falls within the assumed ADWF set forth in the Sanitary Sewer Master Plan. Moreover, the proposed project would pay all applicable impact and connection fees and install the necessary on-site improvements to allow for wastewater service as envisioned under the Sanitary Sewer Master Plan. Therefore, the proposed project's contribution would not be considerable, and the proposed project would result in a less than significant cumulative environmental impact.

Storm Drainage

The appropriate geographical context for cumulative impacts regarding stormwater drainage is the City of Chico's service area. There would be an increased demand for storm drainage services triggered by the proposed project, combined with other cumulative development. However, as discussed in detail therein and above, the City's Storm Drainage Master Plan has adequately accounted for this increased demand in terms of existing and future planned infrastructure and improvements needed to service full General Plan buildout. Additionally, cumulative development, along with the proposed project, has been, and would continue to be, required to adhere to all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, and to consider and evaluate any identified impacts related to the provision of storm drainage services as well as pay applicable impact fees. For these reasons, there would be less than significant cumulative impacts in this regard.

With respect to the proposed project's incremental contribution to this already less than significant cumulative impact, it would not be cumulatively considerable. As discussed in detail above and in Section 3.10, Hydrology and Water Quality, of this Draft EIR, stormwater and flood control system impacts would be less than significant upon the proposed project's compliance with the comprehensive regulatory requirements that would govern implementation of proposed storm drainage infrastructure included as part of the proposed project. Moreover, the proposed project would pay all applicable impact and connection fees as envisioned under the Storm Drainage Master Plan. Therefore, the proposed project's contribution would not be cumulatively considerable, and the proposed project would result in a less than significant cumulative environmental impact.

Solid Waste

The appropriate geographical context for cumulative impacts regarding solid waste is the area served by the Neal Road Landfill. There would be an increased demand for solid waste services triggered by the proposed project, combined with other cumulative development. However, as discussed at length in the City's General Plan EIR, there is sufficient landfill capacity to serve projected General Plan buildout. As detailed above, the estimated remaining available capacity at the Neal Road Landfill is 16,588,874 cubic yards as of 2020, and the closure date is not expected to be reached until 2048. Additionally, cumulative development, along with the proposed project, has been, and would continue to be, required to adhere to all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, and to consider and evaluate any identified impacts related to the provision of solid waste disposal services as well as pay applicable fees. For these reasons, there would be less than significant cumulative impacts in this regard.

With respect to the proposed project's contribution to this already less than significant cumulative impact, it would not be cumulatively considerable. As discussed in detail above, there is sufficient landfill capacity to accommodate the proposed project's solid waste demand at full buildout. Moreover, the proposed project would be required to comply with the comprehensive regulatory requirements that would govern its handling and disposal of solid waste. Therefore, the proposed project's contribution would not be cumulatively considerable, and the proposed project would have a less than significant cumulative impact in this regard.

Electricity, Natural Gas, and Telecommunications

The geographic context for an analysis of cumulative impacts to electricity and natural gas is the PG&E service area, and with respect to telecommunications, it is the service area of Comcast.

The proposed project, combined with other cumulative development, would result in increased demand for electricity, natural gas and telecommunications services. The relevant utilities have historically responded, and would continue to respond, to increased demands in various ways. These may include temporary stoppages or rolling blackouts, extension of existing infrastructure, and/or construction of new planned facilities and related infrastructure. Each of these utility providers prepares long-range plans to accommodate projected growth in their service areas. For example, PG&E provides annual sustainability reports that outline strategies to accommodate future growth and ensure reliability of electrical and natural gas services. As indicated in the PG&E 2024 Corporate

Sustainability Report, PG&E delivered over 30 percent renewable energy to customers in 2023.[22] Thus, cumulative development, along with the proposed project, has been and would continue to be accounted for in the respective utility plans, which are updated regularly to ensure continuity of service. Additionally, cumulative development, along with the proposed project, have been and would continue to be required to adhere to all applicable federal and State laws and regulations, programs, and standards, including goals, policies, and actions discussed above, consider and evaluate any identified impacts related to the provision of dry utility services as well as pay applicable connection fees. For these reasons, cumulative impacts would be less than significant.

With respect to the proposed project's contribution to this already less than significant cumulative impact, it would not be cumulatively considerable. PG&E has confirmed its ability to serve the proposed project and telecommunication companies respond to expected growth accordingly. Moreover, pursuant to MM ENER-1, the proposed project's use of natural gas would be significantly constrained, thereby further reducing needs for infrastructure and service in this regard. Moreover, the proposed project would be required to comply with applicable requirements and standards in this regard and to pay all applicable connection fees in connection therewith. Therefore, the proposed project's contribution would not be cumulatively considerable, and as such, the proposed project would not result in cumulatively considerable impacts.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

[22] Pacific Gas and Electric Company (PG&E). 2024. Corporate Sustainability Report. Website: https://www.pgecorp.com/assets/pgecorp/csr/csr_2024/assets/pge-csr-2024.pdf. Accessed December 11, 2024.

3.18 - Wildfire

3.18.1 - Introduction

This section describes the existing wildfire conditions on the Barber Yard Specific Plan (BYSP) Area, and off-site improvement area (project site) and vicinity as well as the relevant regulatory framework. This section also evaluates the potential impacts related to wildfire that could result from implementation of the proposed project. The analysis in this section is based, in part, on information provided by the City of Chico (City) General Plan (General Plan) and the California Department of Fire and Forestry Protection (CAL FIRE), including the City 2030 General Plan and EIR, City Land Use and Development Regulations, 2008 CAL FIRE/Butte Unit Community Wildfire Protection Plan, City Community Wildfire Protection Plan (CWPP), and the California Air Resources Board (ARB). No public comments were received during the Notice of Preparation (NOP) scoping period related to wildfire.

As discussed above, the project site encompasses the BYSP Area and the off-site improvement area, inclusive of the two Storm Drain Outfall Route options; when conditions differ between areas, the area will be identified specifically.

3.18.2 - Environmental Setting

Fire environments are dynamic systems and are influenced by many types of environmental factors and site characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. The three major components of fire environment are vegetation (fuels), climate, and topography. The state of each of these components and their interactions with each other determines the potential characteristics and behavior of a wildfire. In addition, the type, location, and intensity of a wildfire can affect wildlife, vegetation, air quality, water quality, and slope stability to varying degrees, as discussed below. A wildfire is a nonstructural fire that can occur in undeveloped areas and spread to urban areas where the landscape and buildings are receptive to ignition.

Understanding the fire environment on and adjacent to the project site is necessary to understand the potential for fire to occur within and around the project site.

The project site is under the jurisdiction of the Chico Fire Department (CFD). CFD maintains a robust automatic aid agreement with the CAL FIRE and Butte County Fire Department.[1]

The following provides more information regarding the fire environment associated with the proposed project and potential environmental effects of a wildfire burning on or near the project site.

[1] City of Chico. 2011. Chico 2030 General Plan. Safety Element. April.

Wildfire Occurrence

City of Chico and Vicinity

As noted in the Safety Element of the City 2030 General Plan, Chico has the potential for urban structural fires and wildland fires. Upper Bidwell Park and the foothills on the eastern edge of the community are particularly prone to wildland fire.

Strong winds and drought conditions in November 2018 created the deadliest wildfire in California's history, the Camp Fire, which destroyed the adjacent Town of Paradise and drove a massive influx of climate migrants into the City. Fortunately, no damage occurred in the City; however, multiple structures were destroyed within the surrounding Chico Urban Area. Fire again threatened the region in August 2020, when a lightning strike caused the Northern Complex fire in Plumas and Butte Counties.

On July 24, 2024, the Park Fire started in Upper Bidwell Park, approximately 5 miles from the Project site. The cause of the fire was arson. In total, approximately 420,603 acres were burned throughout mountainous and foothill regions in Butte and Tehama Counties and 709 structures were destroyed.

In addition to the Park Fire, as of October 15, 2024, CAL FIRE recorded 14 wildfire incidents ranging from 8 to 3,789 acres. Besides the Park Fire, the next closest was the Centerville Fire (59 acres) located 10 miles from the project site (also located within the foothills). Two wildfire incidents were recorded in Butte County during the 2023 fire season. A total of 133 acres were burned between the Cemetery Fire and Turkey Fire; however, both incidents occurred more than 15 miles away from the City.[2] During the 2022 fire season, the County experienced five wildfire incidents and a total of 512 acres were burned between the Nelson Fire, 99 Fire, Park Fire, Sandra Fire, and Jan-Dar Fire; however, all five incidents occurred more than 15 miles away from the City, in the southern and southeastern portions of the County.[3]

Project Site

The project site has not been directly affected by wildfire in the known past; however, urban, structural fires have occurred on-site in the past. For example, arson resulted in the destruction of the apiary and lumber warehouse building in 2004.[4] The remaining on-site buildings are primarily constructed of non-combustible materials and thus have not been subject to fire damage.

Wildfire Hazard Area Designations

Public Resources Code Sections 4201 through 4204 direct CAL FIRE to map Fire Hazard Severity Zones (FHSZs) within State Responsibility Areas (SRAs) based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by CAL FIRE as a major cause of wildfire spread. These zones FHSZs classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone. CAL FIRE

[2] California Department of Forestry and Fire Protection (CAL FIRE). 2024. 2023 Fire Incident Archive. Website: https://www.fire.ca.gov/incidents/2023. Accessed October 3, 2024.

[3] California Department of Forestry and Fire Protection (CAL FIRE). 2024. 2022 Fire Season Incident Archive. Website: https://www.fire.ca.gov/incidents/2022. Accessed October 3, 2024.

[4] Firehouse. 2004. Chico, California Factory Goes Up in Flames. Website: https://www.firehouse.com/home/news/10516100/chico-california-factory-goes-up-in-flames. Accessed December 12, 2024.

does not have responsibility for densely populated areas, incorporated cities, agricultural lands, or lands administered by the federal government. Areas where CAL FIRE is responsible for wildland fire protection include lands owned or managed by the State or where the State is financially responsible for the prevention and suppression of wildfires, classified as an SRA.

There are also "Fire Protection Responsibility Areas" (non-SRA) delineated as either a Federal Responsibility Area (FRA) or a Local Responsibility Area (LRA). In areas where local fire protection agencies are responsible for wildfire protection, the land is classified as an LRA.

According to CAL FIRE's FHSZ Viewer, the project site is not located within an SRA and does not contain lands classified as Very High FHSZ within an LRA. The nearest High FHSZ to the project site is located approximately 2.5 miles east of the project site with the nearest Very High FHSZ located even further (approximately 3 miles), northeast of the project site, near the Stilson Canyon community.[5] There are no wildlands located within or adjacent to the project site (Exhibit 3.18-1).

The City (in the CWPP) identifies the project site as a Priority Wildfire Safety Area (Highest); the CWPP does not identify the off-site improvement area as being contained within this area.

[5] California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. Website: https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed December 12, 2024.

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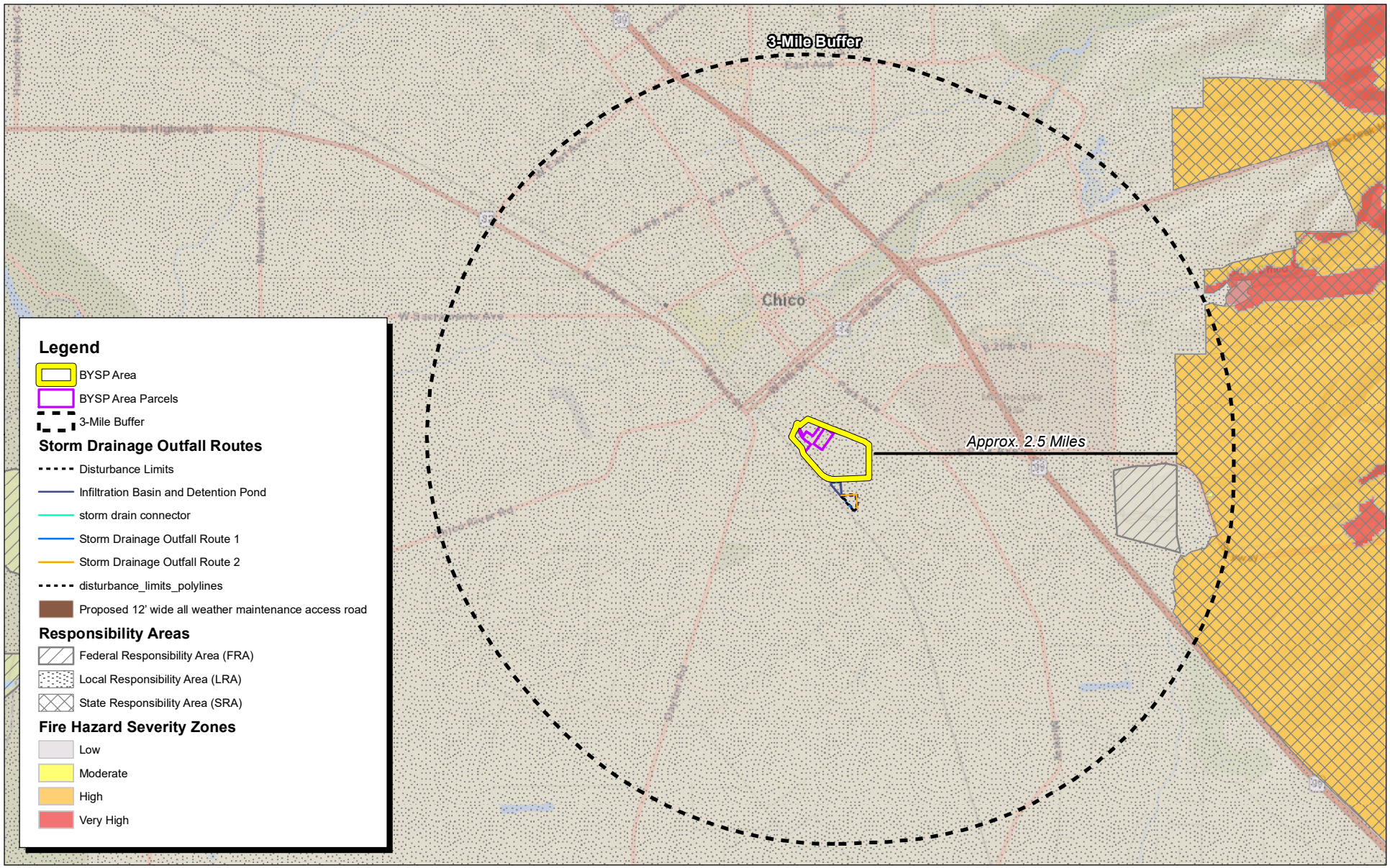

Source: World Street Map. County of Butte. CAL FIRE FRAP.

FIRSTCARBON SOLUTIONS™

6,000 3,000 0 6,000 Feet

Exhibit 3.18-1
Fire Hazard Severity Zones

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CITY OF CHICO
BARBER YARD SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT

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Wildfire-conducive Conditions

Factors that contribute to incidence, severity, and duration of wildfires include fuel load, terrain, climatic conditions, development density, and potential ignition sources. Grasslands, forested areas, and other vegetation in California easily ignite, particularly in dry seasons and during extended periods of climatic drought. Wildfire is a serious hazard in high, dry fuel load areas, particularly near areas of natural vegetation and steep slopes since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher. Table 3.18-1 below lists the existing vegetation communities and land cover types within the project site. Wildfire is also more likely in areas where electric power lines are located above ground where they may encounter vegetation or building materials.

Table 3.18-1: Vegetation Communities and Land Cover Within the Project Site

Vegetation Communities and Land Cover Types	Acreage (approximate)
BYSP Area	
Vegetation Community	
Ruderal/Disturbed	68.4
Remnant Orchard	35.4
Mixed Ornamental Woodland	13.4
Land Cover	
Developed/Access Roads	15.9
Detention Basin	0.2
Total	**133.3**
Off-site Improvement Area	
Vegetation Community	
Orchard	7
Non-native grassland	12.2
Valley Oak Riparian Woodland	0.2
Land Cover	
Dirt Access Road/Baren	0.5
Developed	1.5
Comanche Creek/Aquatic	0.1
Total	**21.5**
Source: FirstCarbon Solutions (FCS). 2023. Biological Resources Assessment. Appendix D.	

The BYSP Area is on the west side of Chico, away from wildfire-prone lands to the east of the City in the foothills. The BYSP Area is relatively flat and largely vacant, except for the remaining structures

and roadways. The off-site improvement area south of the BYSP Area is largely cleared and undeveloped within areas of former almond orchard.

The project site is surrounded by various individual properties to the northwest, Chestnut Street and Normal Avenue to the northeast, Estes Road to the east, and Union Pacific Railroad (UPRR) to the southwest. For example, to the south, the project site is bounded by a portion of Butte County that is unincorporated, including a decommissioned UPRR spur. Agricultural and rural residential areas lie to the south and west across the UPRR.

The project site contains weedy vegetation and remnant orchard trees and other vegetation that could spread fire, particularly in the dry season. The flammability of different vegetation types is based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf size, branching patterns), and overall fuel loading. For example, grass-dominated plant communities become seasonally prone to ignition and produce lower intensity, higher spread rate fires. Onsite remnant orchards may present an increased level of flammability due to the likelihood of dead or dying trees, which provide additionally flammable fuel load that is not regularly maintained.

While there do not appear to be existing overhead power lines on the project site, there are overhead powerlines surrounding the project site and overhead power lines are also located in the vicinity. In general, the City experiences winds that average 8 miles per hour annually, most commonly from the east and the south in summer and north and east in winter.[6] The wind mostly blows from the east/south during the summer and east/north during the winter. Strong, gusty winds were a factor in the rapid spread of the Camp Fire in 2018.[7]

The Southern Cascade/Sierra Nevada foothills to the east of the City are the nearest acreage where large expanses of wildland areas occur. Areas of the City most vulnerable to wildfires are on the eastern side of the City, adjacent to the foothills approximately 2.5 miles east of the BYSP Area, and include Upper Bidwell Park.[8] However, as illustrated in the 2024 Park Fire, which started in Upper Bidwell Park, the distance and open grassland terrain between the foothills and the eastern portions of the City provide a buffer for significant portions of the City from such located wildfire. Furthermore, as noted, the project site is on the west side of the City, farthest from the adjacent foothills.

Climate and Weather

Climate change is expected to influence existing fire-related hazards and vulnerabilities. Consequences of a changing climate include changing precipitation patterns, reduced water supply, and increased hazards such as heat waves and wildfire.[9] Changes in precipitation (rain and snowfall), humidity, and temperature have the cumulative effect of increasing conditions where wildfires could occur with greater frequency and severity. According to the County's Climate Action Plan,

[6] City of Chico. 2022. City of Chico Community Wildfire Protection Plan.
[7] Ibid.
[8] Butte County. 2019. Local Hazard Mitigation Plan 2019. Website: https://www.buttecounty.net/oem/mitigationplans. Accessed March 29, 2023.
[9] Butte County. 2021. 2021 Climate Action Plan. Website: https://www.buttecounty.net/DocumentCenter/View/2255/2021-Butte-County-Climate-Action-Plan-CAP-PDF?bidId=. Accessed October 6, 2024.

Butte County has a large potential wildfire fuel source as well as homes, infrastructure, and business located within the wildland-urban interface. Note that the project site is not located in or near the wildland-urban interface.

According to the Center for Climate and Energy Solutions, drier vegetation and drought conditions have contributed to a doubling of large fires in the western states between 1984 and 2015, with projections indicating that a 1 degree increase in temperature could result in a substantial increase in fires due to warmer temperatures and drier conditions that help fires spread and make them harder to extinguish.[10]

As described in Section 3.3, Air Quality, the project site is located within the Sacramento Valley Air Basin (SVAB). The climate in the Air Basin is characterized by hot, dry summers and cool, wet winters. Chico's annual average temperature is 61 degrees Fahrenheit, with summer highs usually in the 90s and winter lows usually in the 30s. Rainfall in Chico averages about 26 inches per year, with about 55 percent of rainfall occurring in winter and 2 percent during summer. Prevailing winds are moderate in strength and vary from dry land flows from the north to moist ocean breezes from the south. The mountains surrounding the Air Basin create a barrier to airflow, which under certain meteorological conditions trap pollutants in the Air Basin.

Jarbo Gap Winds

The Jarbo Gap winds are a locally named wind phenomenon resulting from winds blowing through the Feather River Canyon in Plumas County. The winds travel down the canyon from the northeast every fall, caused by high-pressure air over the Great Basin seeking a path through the Sierra Nevada to the low-pressure voids on the California coast.[11] The 2018 Camp Fire began north of the Town of Pulga near the Jarbo Gap in Feather River Canyon and moved southwest through Butte County toward the Town of Paradise and the City, which are in the path of these winds. However, again, it should be noted that the project site is located on the western side of the City, farthest from the adjacent foothills in which the Jarbo Gap is located.

Topography

As described in Section 3.7, Geology and Soils, the project site is relatively flat and low in elevation (180 to 200 feet above mean sea level). Fire spreads faster going up slopes. The project site does not contain steep slopes.

Adjacent Land Uses

The adjacent land uses surrounding the project site are as follows: multi-family and single-family residences to the north and east, light industrial to the southeast, rural residential, agricultural, and Comanche Creek to the south, and the UPRR and agricultural orchards to the west.

[10] Center for Climate and Energy Solutions (CES). 2024. Wildfires and Climate Change. Website: https://www.c2es.org/content/wildfires-and-climate-change/. Accessed December 12, 2024.

[11] St. John, P., J. Serna, and R. Lin II (St. John et al.).2018. Must Reads: Here's how Paradise ignored warnings and became a deathtrap. Los Angeles Times. December 30, 2018. Website: https://www.latimes.com/local/california/la-me-camp-fire-deathtrap-20181230-story.html. Accessed on December 12, 2024.

Fire Protection

The Chico Fire Department (CFD), also known as City of Chico Fire-Rescue, provides fire protection services and first responder life support for the city. CFD provides fire suppression, fire prevention, technical rescue, hazardous materials mitigation, first responder basic life support and advanced life support services. Total staffing of CFD consists of approximately 57 full-time firefighters and 8 volunteer firefighters. Current operating stations include Fire Stations 1, 2, 4, and 5. Station 3 is currently unstaffed. Fire Station 1, located at Salem Street and West 9th Street, is the closest fire station to the project site, located approximately 0.44 mile from the northeast edge of the BYSP Area. Fire services in Chico are also supported by the North Division Battalion of the Butte County Fire Department. Battalion 4 includes the City, the community of Durham, portions of Butte Valley, and the surrounding foothills. The City is also part of the California Disaster and Civil Defense Master Mutual Aid Agreement, which states that all resources and facilities of the State, including all political subdivisions, shall voluntarily aid and assist each other in the event of a disaster by the interchange of services including fire protection.[12] The City is also signatory to the Chico Urban Area Fire and Rescue Agreement, which provides for closest engine response to all emergencies, regardless of jurisdiction, within the designated service area (including areas outside the City's Sphere of Influence). The City has a mutual aid agreement with CAL FIRE in mutual threat zones, which are geographical areas on both sides of the political boundaries between the City and a SRA, where a wildland fire would threaten both jurisdictions.[13]

Water Supply and Infrastructure

As stated above, fire protection and emergency medical services would be provided by the CFD. The CFD's frontline apparatus consists of Truck 1 and Engines 2, 4, and 5. There are 4,311 fire hydrants located throughout the City. Refer to Section 3.14, Public Services, for detailed discussion regarding fire protection and emergency medical services available to the proposed project.[14]

The Water Supply Assessment and Water Supply Verification prepared by EKI Environmental and Water (EKI) concluded that sufficient water supply is available to California Water Service (Cal Water) to meet all existing and planned future demands within the Chico District service area (including those associated with the proposed project and potential firefighting needs) in normal, single dry, and multiple dry years. Refer to Section 3.17, Utilities, for detailed discussion regarding the water supply available to the proposed project.

Emergency and Evacuation Planning

Both the City and Butte County (County) implement programs to facilitate emergency preparedness for other types of incidents within and adjacent to the project site, such as fires. As described above, the City and County have both adopted emergency response plans, which include prearranged

[12] California Governor's Office of Emergency Services (CalOES). 1950. California Disaster and Civil Defense Master Mutal Aid Agreement. November 15, 1950. Website: https://www.caloes.ca.gov/wp-content/uploads/Preparedness/Documents/CAMasterMutAidAgreement.pdf. Accessed on October 7, 2024.

[13] Butte Local Agency Formation Commission (Butte LAFCO). 2018. City of Chico Municipal Service Review and Sphere of Influence Plan. Adopted October 10, 2018. Prepared by Police Consulting Associates, LLC. Website: https://static1.squarespace.com/static/600886efd4535b44c90320be/t/605cee253492925cb39abcdc/1616703028455/Final+Chico+MSR-SOI+Plan++Oct+2018_2.pdf. Accessed October 7, 2024.

[14] City of Chico. 2022. City of Chico Community Wildfire Protection Plan.

emergency response procedures and mutual aid agreements from emergency assistance. Identified emergency routes for evacuation of Chico are State Route (SR) 99 and SR-32.[15]

The Butte County Office of Emergency Management (OEM) is the mutual aid coordination center for Butte County. The OEM has the responsibility for coordinating all fire mutual aid requests in Butte County and has the authority to directly obtain resources from neighboring counties including Yuba, Sutter, Plumas, Glenn, Colusa, Tehama, and Lassen .[16] The OEM coordinates the overall response through the Emergency Operations Center (EOC). The EOC provides a central location for responding and supporting agencies to collaborate response and recovery efforts to effectively and efficiently provide information and deploy resources.[17] The County, together with five incorporated communities and 10 special districts prepared a Local Hazard Mitigation Plan (LHMP) in 2019, which updated the LHMP that was approved by the Federal Emergency Management Agency (FEMA) in 2014. The updated LHMP helps decision-makers direct mitigation activities and resources.

The Butte County Emergency Operations Plan (EOP) addresses the County's planned response to extraordinary emergency situations associated with natural disasters that affect the Butte County Operational Area, which includes the City. The plan focuses on operational concepts and would be implemented in connection with large-scale disasters which can pose major threats to life, property and the environment requiring unusual emergency responses.[18] The City prepared a Community Wildfire Protection Plan (CWPP) in 2022 that assesses wildfire threats and identifies specific areas for targeted vegetation management to reduce exposure to wildfires.[19] The 2018 Camp Fire nearly burned to the City limits, and other fires, such as the 2017 Tubbs Fire (in Napa and Sonoma Counties) and 2021 Marshall Fire (southeast of Boulder, Colorado) have highlighted the potential for wildfires to occur in densely built landscapes in and adjacent to wildland interfaces.[20] The CWPP also identifies parcels within the City that face elevated wildfire hazards. The CWPP identifies the BYSP Area as a "highest priority parcel" for wildfire education and hazard mitigation, as the BYSP Area is currently undeveloped and there is an ongoing need for maintenance and weed abatement.[21]

3.18.3 - Regulatory Framework

Federal

International Fire Code

Created by the International Code Council, the International Fire Code is not a federal regulation but provides important guidance regarding a wide array of conditions hazardous to life and property including fire, explosions, and hazardous materials handling or usage. The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire

[15] Chico General Plan. 2011. Chapter 12–Safety Element. April.
[16] Butte County. 2018. "Emergency Command Center Operations". Website: https://www.buttecounty.net/565/Operations. Accessed October 7, 2024.
[17] Butte County. 2019. Local Hazard Mitigation Plan 2019. Website: https://www.buttecounty.net/oem/mitigationplans. Accessed October 7, 2024.
[18] Butte County. 2011. Butte County Operational Area Emergency Operations Plan. Website: https://www.buttecounty.net/oem/EmergencyEvents#:~:text=The%20Butte%20County%20Emergency%20Operations%20Plan%20%28BCEOP%29%20addresses,Oroville%2C%20Gridley%2C%20Biggs%20and%20the%20Town%20of%20Paradise. Accessed October 7, 2024.
[19] City of Chico. 2022. Community Wildfire Protection Plan (CWPP).
[20] Ibid.
[21] City of Chico Fire Department. 2022. City of Chico Community Wildfire Protection Plan.

protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to incorporate into the building and design of new structures or improvement of existing structures in order to protect life and property (often times these measures include construction standards, specialized equipment, and performance requirements). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted.

International Wildland-Urban Interface (WUI) Code

The International WUI Code is published by the International Fire Code and is a model code intended to supplement a city or county's building and fire codes. The objective of the code is to establish minimum regulations for the safeguarding of life and property from the intrusion of fire from wildland fire exposures and fire exposures from adjacent structures, and to prevent structure fires from spreading to wildland fuels, even in the absence of fire department involvement.

State

California Emergency Response Plan

The State of California passed legislation authorizing the California Governor's Office of Emergency Services (Cal/OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Responding to hazardous-materials incidents is one part of this plan. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. The plan is administered by the Cal/OES, which coordinates the responses of other agencies. When Butte County experiences an emergency, Butte County Office of Emergency Management (OEM) coordinates emergency response through the EOC. In the event an EOC is activated, emergency response team members coordinate efforts and work with responding and supporting agencies.[22]

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities, including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

CAL FIRE produced a 2024 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments.

[22] Butte County. 2024. Office of Emergency Management. Website: https://www.buttecounty.net/731/Office-of-Emergency-Management-OEM. Accessed October 7 2024.

The CAL FIRE Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

California Building Standards Code

The State of California provides a minimum standard for building design through the 2022 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2022 CBC is based on the International Building Code, modified for California's conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include, among others, the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

In addition, Section R313 of the 2010 Residential Building Code requires all newly constructed one- and two-family dwellings and townhouses to be equipped with an automatic fire sprinkler system.

California Public Resources Code

California Public Resources Code Sections 4201-4204 and Government Code Sections 51175-51189 directs CAL FIRE to map FHSZs within SRAs and LRAs. Areas of significant fire hazards are identified based on fuels, terrain, weather, and other relevant factors. The FHSZs define the type of mitigation strategies to be applied to reduce risks associated with wildland fires. SRAs were originally mapped by CAL FIRE in 1985 and LRAs in 1996. Within SRAs, the Director of CAL FIRE has designated areas as Moderate, High, and Very High FHSZs. Outside of SRAs, but within LRAs, the Director of CAL FIRE was charged with recommending the locations of Very High FHSZs.

California Public Resources Code Sections 4291–4299 *et seq*. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be maintained. Vegetation that is more than 30 feet from the building, less than 18 inches high, and is important for soil stability may be maintained, as may single specimens of trees or other vegetation that is maintained to manage fuels and would not form a means of rapid fire transmission from other nearby vegetation to a structure. California Public Resources Code Sections 4291–4299 *et seq*. applies to both high fire threat districts, as determined by the California Public Utilities Commission (CPUC) pursuant to its rulemaking authority, and SRAs. Additionally, the Public Resources Code outlines infraction fees, certification, and compliance procedures pursuant to State and local building standards, including, without limitation, those described in Government Code Section 51189(b).

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors[23] on construction equipment that use an internal combustion engine; specify requirements for the safe

[23] A spark arrestor is any device that prevents the emission of flammable debris from a combustion source (i.e., fireplaces, internal combustion engines, and wood burning stoves).

use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (California Public Resources Code [PRC] § 4442);
- Appropriate fire suppression equipment shall be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428);
- On days when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor shall maintain the appropriate fire suppression equipment (PRC § 4427); and
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC § 4431).

Regional

Multi-jurisdictional Local Hazard Mitigation Plan

The County of Butte, along with five incorporated communities (including Chico) and 10 special districts prepared an LHMP in 2019 to update the Butte County LHMP that was approved by FEMA in 2014. The updated LHMP serves as a tool to help decision-makers direct mitigation activities and resources. The LHMP notes that areas of the City more vulnerable to wildfires are on the eastern side of the City adjacent to the foothills, including Upper Bidwell Park.

"Be Ready, Butte" and Butte County Evacuation Zones

Be Ready, Butte is a community-based initiative designed to reduce the impact of destructive wildfires through education and mutual support. The Be Ready, Butte web page includes resources on wildfire prevention and emergency preparedness such as the establishment of defensible space, the use of fire-resistant materials and installation methods, preparation of emergency go-bags and the development of evacuation plans. The web page also includes the most up to date maps of evacuation zones for the entire County, and features evacuation plans and evacuation maps by community. Communities with evacuation plans and maps include Berry Creek, Butte Creek/Butte Valley, Cohasset/Richardson Springs, Forbestown/Clipper Mills/Feather Falls/Robinson Mill/Hurleton, Forest Ranch/Butte Meadows, Paradise/Upper Ridge, Yankee Hill Area, East Oroville/Bangor/Palermo/Cherokee, and South Butte County.[24] Consistent with its location outside all Very High FHSZs, Chico is not featured within the community evacuation plans and maps provided on the Be Ready, Butte web page.

[24] Be Ready, Butte. 2023. Evacuation Plans by Community. Website: https://bereadybutte.com/evacuation-plans-by-community/. Accessed December 12, 2024.

The Butte County Sheriff's Office, in collaboration with CAL FIRE and Butte County Geographical Information Systems, Butte County Sheriff's Search and Rescue, and Pacific Gas and Electric Company (PG&E), has mapped evacuation zones for the entirety of Butte County. According to the Butte County Evacuation Zones map, the project site is located within evacuation zones BUT-CH-196, BUT-CH-200 and BUT-CSW-332.[25]

Local

Community Wildfire Protection Plan

The Community Wildfire Protection Plan (CWPP) assesses wildfire threats and identifies specific areas for targeted vegetation management to reduce exposure to wildfires.[26] The CWPP also identifies parcels within the City that face elevated wildfire hazards. The CWPP identifies the BYSP Area as a "highest priority parcel" for wildfire education and hazard mitigation, as the BYSP Area is undeveloped. As a highest priority parcel, the CWPP highlights the need for mowing of grasses and weed abatement.

Chico 2030 General Plan

The General Plan identifies SR-99 and SR-32 as emergency evacuation routes for the City. The General Plan sets forth the following goals, policies, and actions that are relevant to this wildfire analysis:

Safety Element

Goal S-1 Minimize the loss of life and property resulting from natural and human-caused hazards.

Policies

Policy S-1.1 Promote public safety from hazards that may cause death, injury, or property damage through emergency preparedness and awareness.

Goal S-4 Continue to provide effective and efficient fire protection and prevention services to Chico area residents.

Policy S-4.1 Maintain adequate fire suppression and prevention staffing levels.

Policy S-4.2 Continue to maintain interagency relationships to maximize fire protection services and support programs that reduce fire hazards.

Policy S-4.3 Support the development and implementation of standards and programs to reduce fire hazards and review development and building applications for opportunities to ensure compliance with relevant codes.

[25] Butte County. 2023. Butte County Evacuation Zones. Website: https://buttecountygis.maps.arcgis.com/apps/webappviewer/index.html?id=9c92e0a2d2e0415fa5248d70cd644a82. Accessed May 23, 2022.

[26] City of Chico. 2022. Community Wildfire Protection Plan (CWPP). Public Draft Available for Review and Comment. Website: https://chico.ca.us/wildfireprotectionplan. Accessed December 12, 2024.

Parks, Public Facilities, and Services

Goal PPFS-5 Maintain a sustainable supply of high quality water, delivered through an efficient water system to support Chico's existing and future population, including fire suppression efforts.

3.18.4 - Methodology

This evaluation focuses on whether the proposed project would result in changes to the physical environment that would cause or exacerbate adverse effects related to wildfires or whether the proposed project would be placed in a location susceptible to wildfire or post-wildfire conditions such that an impact pursuant to the relevant significance threshold could occur. The evaluation also includes a determination of whether changes to the physical environment caused by the proposed project would impair or interfere with emergency response plans, expose people to pollutant concentrations from a wildfire or uncontrolled spread of a wildfire, expose people/structures to downslope flooding or landslides, or include installation or maintenance of infrastructure that may exacerbate fire risk. The following analysis is based, in part, on information provided by the City and CAL FIRE.

The project site is not located in an FHSZ, nor is it located in an SRA or a Very High FHSZ zone in a local, State, or federal responsibility area. The nearest High FHSZ to the project site is located approximately 2.5 miles east of the project site, near the Stilson Canyon community. The nearest Very High FHSZ located approximately 3 miles away,[27] The Southern Cascade/Sierra Nevada foothills approximately 2.5 miles east of the BYSP Area represent the nearest SRA and provide the nearest area where large expanses of undeveloped properties occur and pose the highest wildfire risk. The project site is not identified as a community at risk from wildfire by CAL FIRE's "Fire Risk Assessment Program." Communities at risk from wildfire are those places within 1.5 miles of areas of High or Very High wildfire threat as determined from California Department of Forestry-Fire and Resource Assessment Program fuels and hazard data. This analysis considers information provided from multiple sources including, without limitation, CAL FIRE, ARB, City 2030 General Plan and EIR, City Land Use and Development Regulations, City CWPP, and 2008 CAL FIRE/Butte Unit Community Wildfire Protection Plan. The information obtained from these sources and other relevant materials was reviewed to evaluate the potential presence of wildfire risks on the project site and potential impacts related thereto.

3.18.5 - Thresholds of Significance

The City, as Lead Agency, in its discretion has decided to utilize the criteria in the California Environmental Quality Act (CEQA) Guidelines Appendix G Environmental Checklist to determine whether impacts related to wildfire are significant environmental effects. If located in or near state responsibility areas or lands classified as Very High Fire Hazard Severity Zones, would the proposed project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

[27] (CAL FIRE. 2024. Fire Hazard Severity Zone Viewer. Website: https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed December 12, 2024.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (The proposed project will have no significant impacts related to this threshold; therefore, this criteria is addressed in Chapter 4, Effects Found not to be Significant).

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.18.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the construction and operation of the proposed project and provides feasible mitigation measures where appropriate.

Emergency Response/Evacuation Plan Consistency

Impact WILD-1:	**The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.**

Impact Analysis

The project site is not within a designated FHSZ in an SRA; the nearest SRA is approximately 2.5 miles east of the project site, near the Stilson Canyon community within the foothills of the Southern Cascade/Sierra Nevada mountains.

Because the project site is not in or near a Very High FHSZ in the SRA, it does not meet the threshold for a potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. Nonetheless, to thoroughly consider the potential wildfire risks associated with the proposed development of the project site, and in the interest of public safety and full disclosure, the City has considered each of the risk categories set forth in Section 20 and provides the following for informational purposes.

Construction

During construction, it is expected that construction equipment and vehicles would access and leave the project site, which in turn could potentially impede evacuation or Emergency Vehicle Access (EVA). However, for the reasons set forth in Impact TRANS-6 in Section 3-16, Transportation, and Impact HAZ-5 in Section 3-9, Hazards and Hazardous Materials, construction of the proposed project would result in a less than significant impact related to emergency evacuation and EVA. In addition, the proposed project would be designed in accordance with the applicable City standards to accommodate EVA by designing the street network within the BYSP Area to facilitate emergency response and access; the final design of the street network would be approved by the City Development Engineering Division and the CFD. It would also be required to be designed such that the street network and other project improvements would be consistent with all applicable Fire Code requirements and standards. The project site has ready access to evacuation routes such as SR-

99 and SR-32. Given the foregoing, the proposed project's construction would not substantially impair an adopted emergency response plan or an emergency evacuation plan.

Operation

For the reasons set forth in Section 3.14, Public Services, Impact PUB-1, the proposed project would be adequately served by police, fire, and emergency medical services, including with respect to evacuation and EVA. The proposed project would increase the development of residential, mixed-use, commercial, and recreational land uses, creating a higher density and intensity of development within the project site than currently exists. However, given their nature, these types of land uses are not expected to substantially impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans in the City or County. The City's General Plan anticipates buildout and development of the BYSP Area; therefore, current emergency response plans have already taken into account the redevelopment of the project site. It is anticipated that the City and the project applicants would work together and coordinate with local police and fire departments during buildout of the proposed project to ensure services are appropriately responsive to project needs and proposed roadways systems would allow for evacuation and fire truck access in the event of a wildfire emergency. See Section 3.14, Public Services, for additional information in this regard.

In addition, and as previously mentioned, the proposed project would be designed in accordance with the applicable City standards to accommodate EVA by designing the street network within the BYSP Area to facilitate emergency response and access; the final design of the street network would be approved by the City Traffic Department and the CFD. It would also be required to be designed such that the street network and other project improvements would be consistent with all applicable Fire Code requirements and standards.

Blockage of an evacuation route would not occur during project operation because the proposed project would not result in permanent road closures along SR-99 and SR-32 nor along Park Avenue and East 20th Street, which are the most likely evacuation routes from the project site. As described above, the project site is subject to the CWPP, LHMP, and Butte County EOP and would be required to adhere to all applicable laws and regulations governing wildfire/fire hazards. The proposed project does not approve, propose, or authorize development in an SRA or FHSZ. The nearest Very High FHSZ and SRA to the project site is located approximately 2.5 miles northeast of the project site, near the Stilson Canyon community.[28] The Southern Cascade/Sierra Nevada foothills to the east of the City provide the nearest area where large expanses of undeveloped properties occur and pose the highest wildfire hazard severity. In the event of an evacuation, major freeways, including SR-99 and SR-32, could be used. Major roadway access corridors such as Park Avenue and East 20th Street could also be used for emergency access.

In conclusion, because the project site is not located in an FHSZ, nor is it located in an SRA or a Very High FHSZ in a local, State, or federal responsibility area, it does not meet the threshold for a

[28] CAL FIRE. 2024. Fire Hazard Severity Zone Viewer. Website: https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed December 12, 2024.

potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. There would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No impact.

Infrastructure That Exacerbates Fire Risk

Impact WILD-2:	**The proposed project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**

Impact Analysis

Because the project site is not located in or near a Very High FHSZ or an SRA, it does not meet the threshold for a potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. Nonetheless, to thoroughly consider the potential wildfire risks associated with the proposed development of the project site, and in the interest of public safety and full disclosure, the City has considered each of the risk categories set forth in Section 20 and provides the following for informational purposes.

Construction

Impacts related to installation or maintenance of infrastructure (such as roads, fuel breaks, emergency water sources, electrical power lines, or natural gas lines) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment are limited to operational impacts. No respective construction impacts related to infrastructure would occur.

Operation

The proposed project would be served by multiple points of vehicular access, including Ivy Street and West 16th, Street from the initial stages of BYSP development.

Additionally, the project site is located in a primarily urbanized area surrounded by existing roadways and railways. The proposed project would not require the installation of firebreaks because it is in a generally urbanized area surrounded by existing development with little natural vegetation. The proposed project would not require emergency water sources because potable water is currently provided by Cal Water, which has adequate water supplies available to serve the proposed project and other existing and future development during normal, dry, and multiple dry years, as described in Section 3.17, Utilities and Service Systems, Impact UTIL-1. The proposed project involves the installation and maintenance of infrastructure such as roadways and utilities. However, development

of the proposed project would be required to be consistent with the applicable City and County plans and policies in place to reduce the risks associated with wildland fires, as well as the CBC. Furthermore, the proposed electrical system would be undergrounded and installed in a joint trench that would also include conduits and substructure for other dry utilities, including telecommunications, cable, and fiber optics. The joint trench would be extended throughout the project to provide dry utility services to each proposed building.

In conclusion, because the project site is not located in or near an SRA or a Very High FHSZ and will not be required to install infrastructure that may exacerbate wildfire risk, it does not meet the threshold for a potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. There would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No impact.

Flooding and Landslide Hazards Due to Post-fire Slope Instability/Drainage Changes

Impact WILD-3:	**The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

Impact Analysis

Because the project site is not located in or near a Very High FHSZ or an SRA, it does not meet the threshold for a potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. Nonetheless, to thoroughly consider the potential wildfire risks associated with the proposed development of the project site, and in the interest of public safety and full disclosure, the City has considered each of the risk categories set forth in Section 20 and provides the following for informational purposes.

Construction

The proposed project does not approve, propose, or authorize development in an SRA or FHSZ. The nearest Very High FHSZ within an SRA is approximately 2.5 miles east of the BYSP Area; therefore, the risk of wildfire is relatively low compared to other areas in the County.[29] As previously stated, the proposed project would facilitate redevelopment within the BYSP Area.

As discussed at length in Section 3.7, Geology, Soils, and Seismicity, the project site is relatively flat and does not contain topography that would be conducive to landslides or slope instability. The

[29] California Department of Forestry and Fire Protection (CAL FIRE). 2024. Fire Hazard Severity Zone Viewer. Website: https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/. Accessed December 12, 2024.

topography and drainage patterns of the project site would not be significantly changed due to the proposed project. The proposed project would be subject to all applicable laws and regulations, including compliance with relevant General Plan policies and actions as well as other local regulations that reduce flood and landslide risks. Furthermore, as discussed in Section 3.10, Hydrology and Water Quality, the project site is within an area of minimal flood hazard (Zone X). Additionally, the proposed project would be required to adhere to all laws and regulations relating to erosion and flood risk issues, including, without limitation, the implementation of a Storm Water Pollution Prevention Plan (SWPPP) as part of its Construction General Permit. The SWPPP would ensure that erosion and siltation are prevented or minimized to the maximum extent feasible during construction through the implementation of standard BMPs, the implementation of which would be verified by a City inspector. Furthermore, approved grading plans and/or geotechnical reports would be required prior to approval of any new development within the project site.

Therefore, based on the foregoing, the likelihood of the proposed project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of post-fire slope instability or drainage changes is low. In conclusion, because the project site is not located in or near an SRA or a Very High FHSZ, it does not meet the threshold for a potentially significant impact set forth in Section 20 of Appendix G of the CEQA Guidelines. There would be no impact.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

No impact.

3.18.7 - Cumulative Impacts

The geographic scope of the cumulative impact analysis for wildfire impacts is the project site, the City, and the portions of Butte County located outside the BYSP Area that could contribute to wildfire risks. The Southern Cascade/Sierra Nevada foothills, located approximately 2.5 miles east of the project site, provide the nearest areas where large expanses of wildland occur; however, the project site is west of SR-99, which could serve as a fuel break. This analysis evaluates whether the impacts of the proposed project, together with the impacts of other cumulative development, would result in a cumulatively significant impact related to wildfire. This analysis then considers whether the incremental contribution to any identified significant cumulative impacts associated with the implementation of the proposed project would be significant. Both conditions must apply for a proposed project's cumulative effects to rise to a level of significance.

Significant portions of the northern and eastern areas of the City and its Sphere of Influence (SOI) extend into the Sierra Nevada Foothills and are located within Moderate and High FHSZs.[30] However, none of the cumulative projects or areas of cumulative projection as identified in Section 3.0 are located in an identified fire hazard zone. A combination of federal, State, and local laws and regulations limit or minimize the potential for exposure to wildfires by reducing the amount of development in WUI areas, ensuring new construction is developed according to the CBC, and incorporating requirements for fire-safe construction into land use planning. Moreover, with adherence to the County EOP and LHMP, as well as the all other applicable laws and regulations (e.g., relevant provisions of the then-most recent CBC, State and City fire codes) and the incorporation of mandatory fire-resistant construction into land use and planning pursuant thereto, impacts from cumulative development related to wildfire, including emergency response, pollutant exposure, increased wildfire risk, and post-fire flooding or landslides, would be less than significant. As discussed in Section 3.14, Public Services, planned uses proposed by the cumulative projects would not significantly increase the need for emergency services and all development would be required to comply with emergency access requirements, which would be imposed as enforceable standard conditions of approval. Cumulative development would not result in permanent road closures, nor impede established emergency access routes or interfere with emergency response requirements. Accordingly, cumulative projects would not significantly exacerbate wildfire risk. Therefore, the proposed project, combined with other cumulative projects, would not exacerbate wildfire risk such that any significant cumulative impacts with respect to wildfire hazards would occur.

With respect to the proposed project's contribution to this already less than significant cumulative impact, the proposed project would not be located within or near a Very High FHSZ or SRA, and would be required to demonstrate consistency with and/or otherwise adhere to all applicable laws, regulations, standards, requirements, and policies as discussed in this section and, therefore, would not have a cumulatively considerable contribution to this already less than significant cumulative impact. Accordingly, cumulative impacts would be less than significant.

Level of Cumulative Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Cumulative Significance After Mitigation

Less than significant impact.

[30] Butte County. 2019. Butte County Local Hazard Mitigation Plan Update, Annex B – City of Chico, Figure B-31 City of Chico Fire Hazard Severity Zones. Website: https://www.buttecounty.net/DocumentCenter/View/3932/2019-Local-Hazard-Mitigation-Plan---Annex-B---City-of-Chico-PDF. Accessed December 13, 2024.

CHAPTER 4: EFFECTS FOUND NOT TO BE SIGNIFICANT

4.1 - Introduction

This chapter is based, in part, on the Barber Yard Specific Plan Draft Environmental Impact Report (Draft EIR) Notice of Preparation (NOP), dated April 12, 2023, and contained in Appendix A of this Draft EIR. The NOP was prepared to identify the potentially significant effects of the proposed project and was circulated for public review for a 30-day public review period, plus an additional 15 days to facilitate a second public scoping meeting, between March 25, 2023, and May 9, 2023. In the course of the NOP evaluation, certain impacts were identified as being anticipated to be less than significant given the nature of the various project components and the project site features. Furthermore, in preparing this Draft EIR, certain impacts have been determined to be less than significant in accordance with applicable provisions of CEQA, as detailed below and herein.

This chapter provides a brief description of effects found not to be significant or less than significant, based on the NOP, NOP public comments received, or more detailed analysis conducted as part of the Draft EIR preparation process. This chapter is limited to those topical areas found to have no impact.

No NOP public comments were received related to State scenic highways, conversion of forest and or timberland/Timberland Production, mineral resources, airports, or wildfire. Further information and analyses are set forth below as to the basis for concluding that certain aspects of the foregoing environmental topical areas would not result in any significant impacts. In addition to the information and evaluation provided in this chapter, note that a number of impacts that are found to be less than significant are addressed in the various Draft EIR topical sections (Sections 3.1 through 3.18) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision-makers and the general public and to facilitate the readers' understanding of the overall environmental impact within the relevant topical area.

4.2 - Environmental Effects Found not to be Significant

4.2.1 - Aesthetics, Light, and Glare

State Scenic Highways

A significant impact would occur if the proposed project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Scenic highways are California highways designated by a local governing body and protected by the State Scenic Highway Program for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. There are no officially designated State Scenic Highways in the City and thus no view corridors from any such scenic highway into the project site exist.[1] Furthermore, the proposed

[1] California Department of Transportation (Caltrans). 2018. California State Scenic Highway System Map. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed October 14, 2024

project contains numerous elements that further ensure no impact in this regard. For example, the Barber Yard Specific Plan (BYSP) includes the potential adaptive reuse of on-site historic buildings as well as retention of numerous on-site trees. Therefore, the proposed project would have no impact on scenic resources within a State Scenic Highway.

4.2.2 - Agriculture and Forestry Resources

Conflict with Existing Zoning or Cause Rezoning of Forest Land or Timberland/Convert Forest Land to Non-Forest Use

A significant impact would occur if the proposed project would conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). A significant impact would also occur if the proposed project would result in the loss of forest land or conversion of forest land to non-forest use.

The project site does not contain any forest land, timberland, or lands zoned as Timberland Production by the City or the County.

The BYSP Area is zoned SPA by the Chico Zoning Ordinance and the General Plan designates the BYSP Area as "Special Planning Area" (SPA) specifically "SPA-2–Barber Yard." The BYSP Area currently consists primarily of abandoned structures and roadways in various states of disrepair associated with prior industrial uses, as well as existing indoor RV storage. The proposed project involves the adoption of a specific plan (and related zoning) consistent with the current SPA General Plan land use designation and SPA zoning, which would further ensure no conflict in this regard. The portion of the off-site improvement area that is under County jurisdiction is zoned as AG-40, however, the AG-40 zoning designation allows for permitted utility facilities such as those proposed on the off-site improvement area as part of the proposed project. Furthermore, the off-site improvement area is not currently actively used for agricultural purposes.

Therefore, because the project site does not contain any forest land, timberland, or lands zoned as Timberland Production by the City or the County, this condition precludes the possibility of adverse impacts in this regard. As such, no impact would occur.

4.2.3 - Geology and Soils

Septic or Alternative Wastewater Disposal Systems

A significant impact would occur if the proposed project would have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

The proposed project would receive wastewater services from the City, utilizing existing City wastewater collection and treatment infrastructure. On-site sanitary sewer mains would be installed to collect wastewater from the proposed project and convey it to an existing 33-inch sewer main along the southern edge of the BYSP Area for treatment at the City's sewer treatment plant. As such,

no septic or alternative wastewater disposal systems would be required, and none are proposed. This condition precludes the possibility of related impacts. As such, no impact would occur.

4.2.4 - Hazards and Hazardous Materials

Airports

The Chico Regional Airport is located approximately 4.60 miles north of the project site and the Ranchero Airport, a private use airport, is located approximately 1.7 miles west of the project site. The Butte County Airport Land Use Compatibility Plan (ALUCP) applies to lands within the City within a 14,000 foot radius of the runway of the centerline of the Chico Regional Airport and within a 9,000 foot radius of the Ranchero Airport runway centerline. The project site is not within an identified airport compatibility zone. Therefore, given the location of the project site, the proposed project would not expose persons residing or working in the project site to excessive noise levels from airport activity. Therefore, no impact would occur.

4.2.5 - Mineral Resources

Loss of Mineral Resources of Statewide or Local Importance

A significant impact would occur if the proposed project would result in the loss of availability of a:

(1) known mineral resource that would be of value to the region and the residents of the State; or

(2) locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

The project site does not have any known mineral resources of value to the region and California residents or any locally-important mineral resource recovery sites. There are no active mines or known areas of mineral resource deposits within the City or its Planning Area.[2] The project site does not currently support mineral extraction operations, nor does the proposed project involved mineral extraction operations. This condition precludes the possibility of a loss of mineral resources of statewide or local importance. As such, no impact would occur.

4.2.6 - Noise

Noise from Airport Activity

A significant impact would occur if the proposed project would:

(1) be located within the vicinity of a private airstrip or an airport land use plan or where such plan has not been adopted, within two miles of a public airport or public use airport; and

(2) expose people residing or working in the project area to excessive noise levels.

[2] City of Chico. 2010. Chico 2030 General Plan Update Draft Environmental Impact Report, Chapter 4.8 Geology and Soils. Website: https://chico.ca.us/documents/Departments/Community-Development/Planning-Division/General-Plan--Other-Planning-Documents/Draft-EIR-Chico-2030-General-Plan/4.8geologyandsoils.pdf. Accessed October 14, 2024.

Neither of the foregoing criteria exist here. The nearest private airport to the project site is Ranchero Airport, located approximately 1.7 miles west of the nearest project site boundary. At this distance, the entire project site is located outside of the Ranchero Airport's 60 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) noise contours. The nearest public airport to the project site is the Chico Municipal Airport, located over 4 miles north of the nearest project site boundary. At this distance, the entire project site is located outside of the Chico Municipal Airport's 60 dBA CNEL noise contours. While the project site falls within the ALUCP, it is not within an identified airport compatibility zone. Therefore, given the location of the project site, the proposed project would not expose persons residing or working in the project site to excessive noise levels from airport activity. Therefore, no impact would occur.

4.2.7 - Population and Housing

Housing Displacement/Replacement Housing

A significant impact would occur if the proposed project would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The project site is primarily vacant, occupied only by structures and roadways associated with former industrial uses (as well as an existing indoor RV storage use), and no housing exists on the project site. Therefore, buildout of the proposed project would not require the demolition of any existing housing units. Because the proposed project would not displace any people or housing, and thus would not necessitate the construction of replacement housing elsewhere, no impact would occur.

4.2.8 - Wildfire

Expose Project Occupants to Pollutant Concentrations from Wildfire

A significant impact would occur if the proposed project would:

(1) be located in or near state responsibility areas (SRA) or lands classified as very high fire hazard severity zones (FHSZ); and

(2) due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Neither of the foregoing criteria exist here. The proposed project would not be located in or near an SRA or Very High FHSZ. The nearest SRA is approximately 2.5 miles east of the proposed project site. The nearest Very High FHSZ to the project site is located approximately 3 miles east, near Stilson Canyon Road.[3] The proposed project would primarily facilitate infill development, creating a higher intensity of development within the BYSP Area. The project site is relatively flat and does not contain topographic features or other factors that would exacerbate wildfire risks. Moreover, buildout of the BYSP Area with the proposed project would result in more urbanization and paved areas, which

[3] Fire Hazard Severity Zones in a State Responsibility Area. Website: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008. Accessed October 14, 2024.

would reduce (rather than exacerbate) the threat of the spread of wildfire. Development under the proposed project would be consistent with applicable City and County plans and policies in addition to applicable Fire Code requirements to further reduce the risks associated with wildland fires. Therefore, no impact would occur.

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CHAPTER 5: OTHER CEQA CONSIDERATIONS

California Environmental Quality Act (CEQA) Guidelines Section 15126 requires that all phases of a proposed project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation. As part of this analysis, the Draft EIR must also identify (1) significant environmental effects of the proposed project; (2) significant environmental effects which cannot be avoided if the proposed project is implemented; (3) significant irreversible environmental changes which would be involved in the proposed project should it be implemented; (4) growth-inducing impact of the proposed project; (5) mitigation measures proposed to minimize the significant effects; and (6) alternatives to the proposed project.

Accordingly, this chapter provides a discussion of other CEQA-mandated topics, including any significant unavoidable impacts, growth inducement, and/or any significant irreversible environmental changes which could occur if the proposed project were implemented.

Chapter 3, Environmental Impact Analysis, describes the significant environmental effects of the proposed project and provides feasible mitigation measures proposed to minimize significant effects. Chapter 6, Alternatives to the Proposed Project, discusses a reasonable range of potentially feasible alternatives to the proposed project.

5.1 - Significant Unavoidable Impacts

California Environmental Quality Act (CEQA) Guidelines Section 15126.2(a)(c) requires an Environmental Impact Report (EIR) to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

Based on the analyses contained in this Draft EIR (including attached appendices), the City of Chico has determined that the proposed project would result in individual-level or cumulative-level significant and unavoidable impacts as listed below.

- Conflict or obstruction of implementation of the applicable air quality plan.
- Cumulatively considerable net increase of any criteria pollutant.
- Cumulative air quality impacts (operational criteria pollutants).

5.2 - Growth-inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for the proposed project to result in growth-inducing impacts, this Draft EIR evaluates the proposed project's characteristics that may encourage and/or facilitate activities that individually or cumulatively may affect the environment (CEQA Guidelines § 15126.2(e)).

CEQA Guidelines, as interpreted by the City, state that a significant growth-inducing impact may result if the proposed project would:

- Induce substantial population growth in an area (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the general plan);
- Substantially alter the planned location, distribution, density, or growth rate of the population of an area; or
- Include extensions of roads or other infrastructure not assumed in the general plan or adopted capital improvements project list, when such infrastructure exceeds the needs of the project and could accommodate future developments.

Therefore, this analysis evaluates whether the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing unplanned population growth or by leading to the construction of additional developments in the same area. Increases in the population may tax existing community service facilities, requiring construction of new or expanded facilities that could cause significant environmental effects. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth, may provide a catalyst for future unrelated development in an area, such as a new residential community that requires additional commercial uses to support residents.

5.2.1 - Direct Population Growth

The proposed project consists of the full buildout of the Barber Yard Specific Plan (BYSP), including a maximum of 1,250 dwelling units, approximately 210,000 square feet of commercial space, as well as open space and recreational amenities. Thus, this analysis considers whether the proposed project would directly induce unplanned population growth or lead to the construction of additional developments in the project vicinity.

The BYSP Area is designated Special Planning Area-2 (SPA-2) in the City's General Plan, which has long contemplated urban development in this area of Chico. According to the California Department of Finance, the average household size in the City is 2.38 people.[1] Therefore, the proposed project could add an estimated 2,975 people to the City's population.[2] As of January 1, 2024 the estimated population for City was approximately 109,589.[3]

[1] California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/. Accessed October 7, 2024.

[2] 1,250*2.35 = 2,975

[3] California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2023. Website: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/. Accessed October 7, 2024.

The Provisional Long-Term Regional Growth Forecasts 2022–2045, prepared in March 2023 by the Butte County Association of Governments (BCAG), provides "low," "medium," and "high growth scenario forecasts for the City and County. The medium growth scenario is used for the purposes of this analysis because it has historically tracked the City's population growth more accurately than low or high scenarios. The forecast indicates that Chico will add 16,520 people from 2025 to 2040. Therefore, the proposed project would represent up to approximately 18 percent of Chico's projected growth over buildout of the proposed project, with the other growth coming from other infill development and potential development of the other Special Planning Areas, as contemplated in the City's General Plan. Therefore, implementation of the proposed project is considered consistent with planned growth as projected by BCAG.

Table 5-1: City of Chico 2022-2045 Population Projections

Long-Term Regional Growth Forecasts 2022–2045 (Medium Scenario Benchmark)					
2022	**2025**	**2030**	**2035**	**2040**	**2045**
102,892	106,276	113,371	120,717	122,796	124,278
Source: Butte County Association of Governments. 2023. Long-term Regional Growth Forecasts 2022–2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed October 7, 2024.					

Indirect Population Growth

As noted above, indirect population growth occurs when a project creates employment opportunities (thereby generating the need for more housing or other facilities) or upsized infrastructure (such as new roads or utility infrastructure) that could lead to additional unplanned growth.

The proposed project would develop approximately 210,000 square feet of commercial space consisting of approximately 130,000 square feet of health/fitness club use, 40,000 square feet of retail plaza use, 22,800 square feet of restaurant use, and 17,200 square feet of event center use. As such, the proposed project could indirectly increase the population by providing additional employment opportunities.

The revised employment forecasts as part of the Long-term Regional Growth Forecasts 2022–2045 project an increase of 15,887 jobs between 2022 and 2045 (Medium Scenario).[4] Therefore, the increase in jobs as a result of the proposed project is considered consistent with planned employment growth as projected by BCAG. According to the California Employment Development Department (EDD), the City contained a labor force of approximately 52,500 persons as of August 2024. Out of the total labor force, 49,600 people were employed, which represents an unemployment rate of 5.6 percent.[5] Therefore, it can reasonably be assumed that employment

[4] Butte County Association of Governments (BCAG). 2023. Long-term Regional Growth Forecasts 2022-2045. Website: https://www.bcag.org/documents/demographics/pop_emp_projections/Growth_Forecasts_2022-2045_Draft.pdf. Accessed September 6, 2024.

[5] California Employment Development Department (EDD). 2024. Labor Force and Unemployment Rate for Cities and Census

opportunities presented by implementation of the proposed project would draw primarily from the existing labor force in the City and would not have an indirect impact related to unplanned population growth.

The BYPS Area is within the City's municipal boundaries and considered an infill site that has long been envisioned for urban development, and the proposed project would be served with urban infrastructure and utilities including potable water, sewer, storm drainage, as well as dry utilities. It does not involve the upsizing of any infrastructure to serve uses beyond those within the BYSP Area.

For the foregoing reasons, the proposed project would not: result in direct or indirect unplanned growth, negatively alter the existing jobs/housing balance, be inconsistent with the General Plan or relevant City infrastructure plans, or otherwise remove a barrier of growth through the extension of infrastructure or utilities to an unserved area. Therefore, the proposed project would not have any significant growth-inducing impacts.

5.3 - Significant Irreversible Environmental Changes

The environmental effects of the proposed project are summarized in the Executive Summary and are analyzed in detail in Section 3, Environmental Impact Analysis, of this Draft EIR.

- As mandated by the CEQA Guidelines Section 15126.2(d), the EIR must evaluate and identify any significant irreversible environmental change(s) that would result from implementation of the proposed project. Primary impacts and, particularly, secondary impacts (such as a highway improvement that would provide access to a previously inaccessible area) generally commit future generations to similar uses. Specifically, pursuant to the CEQA Guidelines Section 15126.2(c), such an impact would occur if: The proposed project would involve a large commitment of nonrenewable resources, which makes removal or nonuse thereafter unlikely;
- The proposed project involves uses in which irreversible damage could result from environmental accidents associated with the project; or
- The proposed project involves any irretrievable commitment of resources is not justified (e.g., the project results in the wasteful use of energy). (Refer to Section 3.6, Energy, which addresses this topic in accordance with CEQA Guidelines Appendix F.)

The proposed project consists of the full buildout of the BYSP, including off-site improvements, resulting in a mixed-use community accommodating a diverse range of housing opportunities with a mix of commercial, recreational, and open space uses located throughout. The foregoing uses would occur on the BYSP Area, long contemplated for urban development by the City's General Plan and considered an infill development site (thereby efficiently utilizing land near existing City services and infrastructure through this redevelopment proposal).

Because of the urbanized and already developed nature of the BYSP Area that has available, existing infrastructure, and further given that the proposed project contemplates an intensification of uses

Designated Places. Website: https://labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html. Accessed October 7, 2024.

that is generally consistent with the overall land use vision and planning assumptions set forth in the General Plan, it is not anticipated that the proposed project would result in significant irreversible environmental changes, as explained further herein.

Residential uses associated with the proposed project would include a maximum of 1,250 dwelling units pursuant to the residential unit cap set forth in the BYSP. Residential density would range from 4 to 35 units per gross acre, and would include single-family detached, pocket neighborhoods, bungalow courts, duplexes, townhouses, garden apartments, and apartments over commercial. Commercial uses associated with the proposed project would include approximately 210,000 square feet of commercial space upon buildout. The three existing on-site buildings would be available for adaptive reuse, totaling approximately 150,000 square feet of commercial space. Additionally, an additional 60,000 square feet of commercial space would be added through mixed-use and freestanding commercial/retail buildings. Additionally, the proposed project would include a future park, recreational, and open space amenities.

The BYSP proposes to implement the following five land use designations: Residential Mixed Use (RMU), Medium Density Residential (MDR), Medium-High Density Residential (MHDR), Primary Open Space (POS), and Secondary Open Space (SOS). The BYSP additionally proposed to implement the following five associated zoning designations within the BYSP Area: Residential Mixed Use (BYSP-RMU), Medium Density Residential (BYSP-R2), Medium-High Density Residential (BYSP-R3), Primary Open Space (BYSP-OS1), and Secondary Open Space (BYSP-OS2). These would be implemented by applying typical City zoning with a BYSP zoning overlay, indicating that consistency with the BYSP is required for development.

Construction and demolition debris recycling practices would be expected to allow for the recovery and reuse of building materials such as concrete, lumber, and steel and would limit disposal of these materials, some of which are nonrenewable. Construction of the proposed project would include the consumption of resources that are not replenishable, or which may renew so slowly to be considered nonrenewable. These resources would include the following: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel, and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Fossil fuels such as gasoline and diesel fuel would also be consumed in the use of construction vehicles and equipment. Consumption of building materials and energy is common to most other development in the region and commitments of resources are not unique or unusual to the proposed project. Development would not be expected to involve an unusual commitment of nonrenewable resources, nor be expected to consume any resources in a wasteful manner.

New buildings would be required to adhere to the latest adopted edition of the California Building Standards Code, which includes a number of standards that would reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent and would lessen the severity of corresponding environmental effects. Although the proposed project would result in an irretrievable commitment of nonrenewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful. For further information in this regard, see Section 3.6, Energy, of this Draft EIR. Overall, the proposed project

would be expected to result in less consumption of resources than a comparable project at the urban edge. The proposed project is in an already urbanized area that is served by public transit and existing infrastructure and services and near existing public pedestrian and bicycle facilities; this would help to reduce Vehicle Miles Traveled (VMT) and related emissions. (See Sections 3.03, Air Quality; 3.08, Greenhouse Gas Emissions; and 3.17, Transportation, of this Draft EIR for further information in this regard.) Moreover, the proposed project involves public trail improvements to further enhance opportunities for pedestrian/bicycle connectivity and use of alternative modes of transportation.

While unlikely, if a major hazardous waste release would occur as a result of implementation of the proposed project, it would constitute a significant irreversible change from an environmental action. However, the proposed project does not have the potential to cause significant environmental accidents through releases into the environment with the implementation of the identified mitigation. The proposed project would also not involve large quantities of hazardous materials. See Section 3.9, Hazards and Hazardous Materials, for additional information in this regard. Furthermore, the project site is not located in or near a Very High Fire Hazard Severy Zone or within a State Responsibility Area as indicated by the California Department of Forestry and Fire Protection (CAL FIRE) and discussed in Section 3.18, Wildfire. As discussed in Section 3.14, Public Services, the Chico Fire Department (CFD) provides fire protection services and emergency medical services across a service area of 33 square miles. Services include fire suppression, aircraft rescue, firefighting, fire prevention, technical rescue, hazardous materials mitigation, and first responder basic and advanced life support services. The CFD maintains a mutual aid agreement with CAL FIRE and Butte County. Mutual aid deployments allow for the rapid mobilization of resources between local governments, regions, and the State to provide the resources necessary to mitigate large-scale emergencies. The proposed project would have sufficient emergency egress and ingress points, and would include typical on-site infrastructure including roads, fire hydrants, and utilities and would adhere to the most recently adopted State and City fire codes. The proposed project does not contain any uses or features that would exacerbate wildfire risks or place occupants at a greater risk of wildfire pollutants or uncontrolled wildfire. Furthermore, the proposed project would be required to comply with applicable provisions of the California Public Resources Code, California Building Standards Code (CBC), and the 2022 California Fire Code with regard to fire safety design measures, construction measures, and plan check requirements.

As such, implementation of the proposed project would not result in significant irreversible environmental changes.

CHAPTER 6: ALTERNATIVES TO THE PROPOSED PROJECT

6.1 - Introduction

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, this Draft Environmental Impact Report (Draft EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this section is to provide decision-makers and the general public with a reasonable range of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the proposed project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines § 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

6.1.1 - Significant Unavoidable Impacts

The proposed project would result in the following significant unavoidable impacts:

- Air Quality: Conflict or obstruction of implementation of the applicable air quality plan.
- Air Quality: Cumulatively considerable net increase of a criteria pollutant.
- Air Quality: Cumulative air quality impacts.

6.1.2 - Alternatives to the Proposed Project

The three alternatives to the proposed project analyzed in this section are as follows:

- **Alternative 1—No Project/No Development Alternative:** The proposed project would not proceed. The project site would remain unchanged, and no new development would occur on the project site for the foreseeable future. Off-site improvements would not be constructed.
- **Alternative 2—Reduced Commercial Alternative:** Under the Reduced Commercial Alternative, 60,000 square feet of commercial uses would not be constructed: 30,000 square feet would be reduced from the fitness club, 20,000 square feet would be removed from the retail plaza, and 10,000 square feet would be removed from restaurants compared to the proposed project. Instead, this alternative would construct additional single-family homes throughout the site with alleyways, increasing the provision of housing within the Barber Yard Specific Plan (BYSP) Area by up to 30 units totaling approximately 40,000 square feet. The proposed 150,000 square feet of adaptive reuse of the Warehouse, Engineering Building, and Shop would remain. Off-site improvements would be similar to the proposed project.

- **Alternative 3—On-site Stormwater Basin Alternative:** Under the On-site Stormwater Basin Alternative, the BYSP Area would be developed similarly to that of the proposed project but with an on-site stormwater basin and reduction in residential units. The basin would be constructed on-site in the vicinity of the BYSP-0S1 (Restricted Use) area in the southern portion of the BYSP Area. A connecting storm drain alignment would connect the on-site stormwater basin to an outfall in Comanche Creek in a location similar to that of the proposed project. To accommodate the on-site stormwater basin, this alternative would require a reduction in residential units of approximately 154 units. Proposed commercial square footage would remain consistent with the proposed project at 210,000 square feet inclusive of the adaptive reuse of existing buildings. Development within the off-site improvement area would not occur except for the construction of a linear storm drain alignment connecting to Comanche Creek.

  These three alternatives to the proposed project are analyzed below. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the City's CEQA Thresholds of Significance (i.e., both the proposed project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

6.2 - Project Objectives

The proposed project's underlying purpose is to create a new mixed-use neighborhood, with a distinct sense of place that incorporates opportunities for commercial, recreational, and entertainment amenities and facilitates the integration of new infrastructure. As stated in Chapter 2, Project Description, the objectives of the proposed project are to:

- Develop the BYSP in an economically viable manner as an extension of the Barber Neighborhood.
- Preserve and celebrate the BYSP Area's rich history to foster a strong sense of place.
- Direct development in proximity to and with connections to the existing Barber Neighborhood, Downtown, and Chico State, supporting the efficient use of land through density.
- Create a wide range of housing opportunities and choices that are generally smaller than the average unit size in Chico and focused on providing options to broad segments of the community.
- Encourage a variety of transportation choices, including access to public transit, support for people-powered modes, and accommodation of emerging technologies.
- Create walkability throughout the BYSP Area and with connections to the surrounding neighborhood.
- Encourage a mix of land uses including a central Social Hub for new residents, the broader neighborhood, and the Chico community.

6.3 - Alternative 1–No Project/No Development Alternative

CEQA Guidelines Section 15126.6(e) requires that an EIR evaluate a "No Project Alternative," which is intended to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. In cases where the proposed project constitutes a land development project, the No Project Alternative is the "circumstance under which the project does not proceed." For many projects, the No Project Alternative represents a "No Development" or an "Existing Conditions" scenario, in which the project site remains in its existing condition and no new development occurs for the foreseeable future. However, CEQA Guidelines Section 15126.6(e)(3)(B) establishes that "If disapproval of the project under consideration would result in predictable actions by others such as the proposal of some other project, this 'no project' consequence should be discussed."

Under the No Project/No Development Alternative, the project site would remain undeveloped for the foreseeable future.

6.3.1 - Impact Analysis

The project site would remain undeveloped for the foreseeable future. Accordingly, this alternative would avoid all of the proposed project's significant impacts (including significant and unavoidable impacts), as well as the need to implement any mitigation measures. Impacts related to wildfire would be greater than the proposed project, because the existing site, the majority of which is undeveloped, acts as potential fuel for wildfires.

6.3.2 - Conclusion

The No Project/No Development Alternative would avoid the proposed project's significant and unavoidable impacts and would avoid any potential impacts related to all environmental topical areas. However, this alternative would result in greater impacts to wildfire due to its current (majority) undeveloped state. This alternative would not advance any of the project objectives, including the development of an extension of the existing Barber Neighborhood, the preservation of the history of the BYSP Area, development in the proximity of and with connections to the existing Barber Neighborhood, Downtown, and Chico State, and the development of a wide range of housing opportunities. Finally, it should be noted that the BYSP Area has a land use designation of "SPA-2-Barber" and has been identified as an area for significant new growth to be developed as connected and complete neighborhoods with a mix of housing types, employment, services, and shopping opportunities, along with parks and open space. Furthermore, it is currently served with infrastructure suitable for this type of development and has been the subject of previous industrial development proposals. Thus, should the proposed project not advance, it would be expected that another Specific Plan or development proposal would be submitted. However, analysis of such an unknown proposal would be speculative.

6.4 - Alternative 2–Reduced Commercial Alternative

Under the Reduced Commercial Alternative, 60,000 square feet of commercial uses would not be constructed. Instead, this alternative would construct additional single-family homes throughout the

site with alleyways, increasing the provision of housing within the BYSP Area by up to 30 units totaling approximately 40,000 square feet. The proposed 150,000 square feet of adaptive reuse of the Warehouse, Engineering Building, and Shop would remain. Off-site improvements would be similar to the proposed project.

6.4.1 - Impact Analysis

Aesthetics, Light, and Glare

Project-level and cumulative impacts related to aesthetics would be less than significant. However, under the Reduced Commercial Alternative, impacts to aesthetics would be slightly different due to the greater cohesion with the existing residential uses in the project vicinity. Nonetheless, all land uses would be required to implement applicable design standards and comply with applicable land use and zoning. Therefore, the Reduced Commercial Alternative would result in less than significant impacts, similar to the proposed project.

Agriculture Resources and Forest Resources

The proposed project would result in no impacts to agriculture and forestry resources. Under this alternative, the footprint of the development would remain the same, and development would still occur on Prime Farmland within the off-site improvement area. As such, the Reduced Commercial Alternative would result in no impacts, similar to the proposed project.

Air Quality

Under the proposed project, project-level and cumulative air quality impacts related to operational reactive organic gases (ROG) emissions are significant and unavoidable despite the implementation of Mitigation Measure (MM) AIR-2 (ROG offset and off-site mitigation). All other air quality impacts such as construction emissions, construction and operation health risks, and odor, are determined to be less than significant with mitigation.

Under this alternative, the overall building square footage from all land uses combined would be approximately 20,000 square feet lower than the proposed project. The alternative would result in similar impacts as the proposed project for construction emissions, construction and operation health risks, and odor.

As discussed in Section 3.3 Air Quality Impact AIR-2, the proposed project would result in a significant and unavoidable impact related to ROG operation emissions exceeding thresholds. As shown in Table 3.3-15, the main source of ROG emissions comes from use of consumer products, which is estimated based on the building square footage. Mobile source emission is the second largest contributor to ROG emissions from the proposed project. This alternative would have different land uses which would influence the number of trips generated and the associated amount of emissions. This alternative's ROG emissions were calculated using CalEEMod, and the daily emissions (in pounds) is presented in Table 6.1 below. The proposed project's ROG emissions are also presented in the table. As shown in the table, project buildout (2042) for Reduced Commercial Alternative would result in 57.8 pounds per day of ROG emissions, which is slightly less than the proposed project's ROG emissions of 60.7 pounds per day, but still exceeds the Butte County Air

Quality Management District (BCAQMD) threshold of 25 pounds per day. The CalEEMod outputs are included as Appendix L of this document.

Table 6-1: Alternative 2–ROG Emissions Compared to the Proposed Project and BCAQMD Threshold

Scenario	ROG emissions in 2042	
	tons/yr	lb/day
Proposed Project	11.1	60.7
Reduced Commercial Alternative	10.5	57.8
Significance Threshold	—	25
Notes: ROG = reactive organic gases Source: Appendix L		

Therefore, although operational ROG impacts under the Reduced Commercial Alternative would be reduced compared to the proposed project due to the reduction in building square footage, this alternative would still result in a significant and unavoidable operation ROG impact even with the implementation of mitigation. Therefore, this alternative would also conflict with Air Quality Attainment Plan, although to a slightly less degree compared to the proposed project.

Biological Resources

The proposed project would have less than significant project-level and cumulative impacts related to biological resources with the implementation of MM BIO-1 through MM BIO-8. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area, and therefore would also be required to incorporate MM BIO-1 through MM BIO-8 to reduce potential impacts to biological resources. As such, impacts would be less than significant with mitigation, similar to the proposed project.

Cultural Resources and Tribal Cultural Resources

The proposed project would have less than significant impacts related to cultural resources with the implementation of MM CUL-1a, MM CUL-1b, and MM CUL-2. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area and therefore would also be required to implement the same mitigation as the proposed project. As such, Impacts would be less than significant with mitigation, similar to the proposed project.

Energy

Project-level and cumulative impacts related to energy under the proposed project would be less than significant with the implementation of MM ENER-1. This alternative would reduce the commercial uses but increase single-family housing compared to the proposed project. Nonetheless, this alternative would not result in wasteful, inefficient, or unnecessary consumption of energy

resources, nor would it obstruct implementation of an energy plan. As such, impacts related to energy would be less than significant with mitigation, similar to the proposed project.

Geology and Soils

Project-level and cumulative impacts related to seismic-related hazards, soil erosion, soil-related hazards, and paleontological resources would be less than significant with the implementation of MM GEO-1. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area and therefore would also be required to implement the same mitigation as the proposed project. As such, impacts would be less than significant with mitigation, similar to the proposed project.

Greenhouse Gas Emissions

A significant impact would occur if a project were inconsistent with the City's Climate Action Plan (CAP). The proposed project has been designed to comply with the City's CAP. Project-level and cumulative impacts related to greenhouse gas emissions (GHG)s would be less than significant with the implementation of MM ENER-1. Development within this alternative would also be designed to comply with the City's CAP, which would ensure a less than significant GHG impact but still require the implement MM ENER-1. Therefore, this alternative would have less than significant GHG impacts with mitigation, similar to the proposed project.

Hazards and Hazardous Materials

The proposed project's impacts related to hazards, hazardous materials, and wildfire would be less than significant with the implementation of MM HAZ-1. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area and therefore would also be required to implement the same mitigation as the proposed project. As such, impacts would be less than significant with mitigation, similar to the proposed project.

Hydrology and Water Quality

The proposed project's impacts related to hydrology and water quality would be less than significant with the implementation of MM HAZ-1 and MM BIO-8. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area and therefore would also be required to implement the same mitigation as the proposed project. As such, impacts would be less than significant with mitigation, similar to the proposed project.

Land Use and Planning

The proposed project's impacts related to land use and planning would be less than significant. Under the Reduced Commercial Alternative, development would be consistent with the land use and zoning of BYSP Area of SPA-2–Barber Yard, including "Low-Density Residential," "Medium-Density Residential," "Medium High-Density Residential," "High Density Residential," "Residential Mixed Use," "Commercial Mixed Use" (CMU), "Office Mixed Use," "Industrial/Office Mixed Use," and "Secondary Open Space." Overall, as compared to the proposed project, a similar but different mix of land uses would occur. As such, under this alternative, project impacts related to land use and planning would also be less than significant, similar to the proposed project.

Noise

The proposed project would have less than significant impacts related to noise with the implementation of MM NOI-1 through MM NOI-3. The Reduced Commercial Alternative would develop the same project footprint within the BYSP Area and off-site improvement area with similar land uses (albeit with a different mix of commercial and residential uses) as the proposed project Therefore, this alternative would similarly be required to incorporate MM NOI-1 through MM NOI-3 to reduce potential noise impacts. As such, impacts would be less than significant with mitigation, similar to the proposed project.

Population and Housing

The proposed project impacts related to population and housing would be less than significant. Under the Reduced Commercial Alternative, 30 additional units would be constructed within the project area, potentially leading to a population increase of 71 residents greater than the proposed project. However, land use would still be generally consistent with that envisioned in the General Plan. Therefore, it is assumed that while population would increase under this alternative compared to the proposed project, it would not increase so much that it would be considered unplanned growth. As such, impacts would be less than significant, similar to the proposed project.

Public Services

Project-level and cumulative impacts to public services would be less than significant under the proposed project. Because of the increase in housing, this alternative could result in an increased demand for public services compared to the proposed project. Like the proposed project, this alternative would be required to pay applicable public services related development fees to accommodate increased public service needs. Therefore, impacts would be less than significant, similar to the proposed project.

Recreation

The proposed project would have less than significant project-level and cumulative impacts to recreation with the implementation of various mitigation measures identified throughout this EIR, including but not limited to, for example, MM AIR-1, MM AIR-2, MM AIR-3, MM ENER-1, MM GEO-1, MM NOI-1, MM NIO-2a, MM NIO-2b, and MM NOI-3, which address potential significant impacts related to the construction of on-site recreational facilities. The Reduced Commercial Alternative would develop the same project footprint with similar recreational facilities and therefore would be required to implement similar mitigation. The increased amount of housing included within this alternative would potentially lead to a greater population increase within the BYSP Area than estimated under the proposed project and therefore an increased use of and need for recreational facilities. Similar to the proposed project, this alternative would be required to dedicate land and/or pay park facility fees in order to mitigate impacts on parks. Therefore, impacts related to recreation would be less than significant with mitigation and payment of park facilities fees, similar to the proposed project.

Transportation and Traffic

The proposed project would have a less than significant project-level and cumulative impact on transportation with the implementation of MM TRANS-2 and MM TRANS-3 and would produce Vehicle Miles Traveled (VMT) generation rates lower than the applicable threshold for residential and work-related land uses. Development under the Reduced Commercial Alternative would comply with existing regulations and plans; therefore, similar to the proposed project, impacts related to consistency with transportation plans, geometric design features, and emergency access, would be less than significant. Trip generation compared to the proposed project would be reduced by approximately 8 percent. However, the increased proportion of residential housing and reduction of commercial uses would have the potential to increase VMT per resident above regional thresholds, as VMT outside of the proposed project would be increased. Because of the nuanced nature of VMT, it is conservatively assumed that traffic impacts would be significant and unavoidable, greater than the proposed project.

Utilities and Service Systems

The proposed project would have less than significant project-level and cumulative utility and service system impacts. The Reduced Commercial Alternative would increase housing by 30 additional units compared to the proposed project, potentially resulting in a greater demand for utilities and service systems within the BYSP Area than estimated under the proposed project. However, such demand would still be within that considered and planned for in the General Plan. Like the proposed project, this alternative would be required to pay applicable public utility and services system related development fees to accommodate increased utility and service system demand. As such, impacts are assumed to be less than significant, similar to the proposed project.

Wildfire

The BYSP Area and off-site improvement area is not located in or near an State Responsibility Area (SRA) or Very High Fire Hazard Severity Zone (VHFHSZ), and project-level and cumulative impacts related to wildfire would be less than significant. The Reduced Commercial Alternative would be located within the same site as the proposed project. As such, no impacts would occur, similar to the proposed project.

6.4.2 - Conclusion

Under the Reduced Commercial Alternative, 60,000 square feet of commercial uses would not be constructed. Instead, this alternative would construct additional single-family homes throughout the site with alleyways, increasing the provision of housing within the BYSP Area. The proposed 150,000 square feet of adaptive reuse of the Warehouse, Engineering Building, and Shop would remain. Similar to the proposed project, impacts related to wildfire would not occur, and impacts related to aesthetics, agriculture and forestry resources, land use, population and housing, public services, recreation, and utilities and service systems would be less than significant. Also similar to the proposed project, impacts from this alternative related to biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, and noise impacts would be less than significant with the implementation of mitigation. Impacts related to air quality would be slightly reduced but, similar to the proposed

project, still significant and unavoidable. It is conservatively assumed that traffic impacts related to increased VMT would be greater than the proposed project and significant and unavoidable.

6.5 - Alternative 3–On-site Stormwater Basin Alternative

Under the On-site Stormwater Basin Alternative, the BYSP Area would be developed similarly to that of the proposed project but with an on-site stormwater basin and reduction in residential units. The basin would be constructed on-site in the vicinity of the BYSP-0S1 (Restricted Use) area in the southern portion of the BYSP Area and would require approximately four acres of space. A connecting storm drain alignment would connect the on-site stormwater basin to an outfall in Comanche Creek, in a location similar to that of the proposed project. To accommodate the on-site stormwater basin, this alternative would require a reduction in residential units of approximately 154 units. Proposed commercial square footage would remain consistent with the proposed project at 210,000 square feet inclusive of the adaptive reuse of existing buildings. Development within the off-site improvement area would not occur except for the construction of a linear storm drain alignment connecting Comanche Creek.

6.5.1 - Impact Analysis

Aesthetics, Light, and Glare

Development under the proposed project would have a less than significant impact on scenic vistas, visual character of the surrounding area, and light and glare. Additionally, the development contemplated under the proposed project is considered planned development under the BYSP. As such, project and cumulative impacts would be less than significant under the proposed project.

Under the On-site Stormwater Basin Alternative, impacts related to aesthetics would be similar to the proposed project. Like the proposed project, all land uses would be required to implement applicable design standards and comply with applicable land use and zoning. Therefore, the On-site Stormwater Basin Alternative would result in less than significant impacts related to aesthetics, light, and glare, similar to the proposed project.

Agriculture Resources and Forest Resources

The On-site Stormwater Basin Alternative would develop similar uses as the proposed project within the BYSP Area but would not result in the off-site development of the stormwater detention basin within Prime Farmland. As such, project impacts would be less than significant, less than the proposed project.

Air Quality

Under the proposed project, project-level and cumulative air quality impacts related to operational ROG emissions are significant and unavoidable despite the implementation of MM AIR-2 (ROG offset and off-site mitigation). All other air quality impacts such as construction emissions, construction and operation health risks, and odor, are determined to be less than significant with mitigation.

Under this alternative, the proposed residential units would be reduced while commercial square footage would remain similar to the proposed project. This alternative would result in similar

impacts for construction emissions, construction and operation health risks, and odor, albeit at a slightly reduced level due to the reduced residential construction.

As discussed in Section 3.3 Air Quality Impact AIR-2, the proposed project would result in a significant and unavoidable impact related to ROG operation emissions exceeding thresholds. As shown in Table 3.3-15, the main source of ROG emissions comes from use of consumer products, which is estimated based on the building square footage. Mobile source emission is the second largest contributor to ROG emissions from the proposed project. This alternative would result in reduced residential land uses, which would influence the number of trips generated and the associated amount of emissions. This alternative's ROG emissions were calculated using CalEEMod, and the daily emissions (in pounds) is presented in Table 6-2 below. The proposed project's ROG emissions are also presented in the table. As shown in the table, project buildout (2042) for the On-site Stormwater Basin Alternative would result in 46.8 pounds per day of ROG emissions, which is slightly less than the proposed project's ROG emissions of 60.7 pounds per day but still exceeds the BCAQMD threshold of 25 pounds per day. The CalEEMod outputs are included as Appendix L of this document.

Table 6-2: Alternative 3–ROG Emissions Compared to the Proposed Project and BCAQMD Threshold

Scenario	ROG emissions in 2042	
	tons/yr	lb/day
Proposed Project	11.1	60.7
On-site Stormwater Basin Alternative	8.5	46.8
Significance Threshold	—	25
Source: Appendix L.		

Therefore, although operational ROG impacts under the On-site Stormwater Basin Alternative would be reduced compared to the proposed project due to the reduction in residences, this alternative would still result in a significant and unavoidable operational ROG impact, even with the implementation of mitigation. Therefore, this alternative would also conflict with also Air Quality Attainment Plan, although to a slightly less degree compared to the proposed project.

Biological Resources

The proposed project would have less than significant project-level and cumulative impacts related to biological resources with the implementation of the MM BIO-1 through MM BIO-8. The On-site Stormwater Basin Alternative would reduce development within the off-site improvement area to a linear storm drain alignment connecting to Comanche Creek, resulting in a reduced off-site impacts area. Because of the this, impacts related to biological resources under the On-site Stormwater Basin Alternative would be less than significant with mitigation, less than the proposed project.

Cultural Resources and Tribal Cultural Resources

The proposed project would have less than significant project-level and cumulative impacts related to cultural resources with the implementation of MM CUL-1a, MM CUL-1b, and MM CUL-2. The On-site Stormwater Basin Alternative would develop similar uses but would reduce off-site development to a linear storm drain alignment connecting to Comanche Creek, resulting in a reduced off-site impact area. Nonetheless, this alternative would be required to implement the same mitigation as the proposed project. As such, impacts to cultural resources would be less than significant with mitigation incorporated and less than the proposed project.

Energy

Project-level and cumulative impacts related to energy under the proposed project would be less than significant with the implementation of MM ENER-1. The On-site Stormwater Basin Alternative would develop fewer residential uses than the proposed project. Nonetheless, this alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources, nor would it obstruct implementation of an energy plan. As such, impacts related to energy under the On-site Stormwater Basin Alternative would be less than significant with mitigation, similar to the proposed project.

Geology and Soils

Project-level and cumulative impacts related to seismic-related hazards, soil erosion, soil-related hazards, and paleontological resources would be less than significant with the implementation of MM GEO-1. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area. Nonetheless, this alternative would be required to implement similar mitigation as the proposed project. As such, impacts would be less than significant with mitigation and less than the proposed project.

Greenhouse Gas Emissions

A significant impact would occur if a project were inconsistent with the City's CAP. The proposed project has been designed to comply with the City's CAP. Project-level and cumulative impacts related to greenhouse gas (GHG) emissions would be less than significant with the implementation of MM ENER-1. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area and result in reduced residences. Because of the reduction in housing construction and decreased off-site construction, overall GHG emissions would be reduced. Long-term operational GHG emissions would also be incrementally reduced compared to the proposed project due to the reduction in residential units. Development within this alternative would be designed to comply with the City's CAP, which would ensure a less than significant GHG impact but still require implementation of MM ENER-1. Therefore, this alternative would have less than significant GHG impacts with mitigation, but less than the proposed project.

Hazards and Hazardous Materials

The proposed project's impacts related to hazards, hazardous materials, and wildfire would be less than significant with the implementation of MM HAZ-1. The On-site Stormwater Basin Alternative

would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area and reduce the number of residences. Because of similar development within the BYSP Area, this alternative would also be required to implement MM HAZ-1. As such, under the On-site Stormwater Basin Alternative, project impacts related to hazards, hazardous materials, and wildfire would also be less than significant with mitigation, but less than the proposed project.

Hydrology and Water Quality

The proposed project's impacts related to hydrology and water quality would be less than significant with the implementation of MM HAZ-1 and MM BIO-8. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area. Nonetheless, this alternative would also be required to implement similar mitigation as the proposed project. As such, impacts related to hydrology and water quality would also be less than significant with mitigation, but less than the proposed project.

Land Use and Planning

The proposed project's impacts related to land use and planning would be less than significant. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce on-site housing and development within the off-site improvement area. Under the On-site Stormwater Basin Alternative, development would be consistent with the land use and zoning of BYSP Area of SPA-2–Barber Yard, including "Low-Density Residential," "Medium-Density Residential," "Medium High-Density Residential," "High Density Residential," "Residential Mixed Use," "Commercial Mixed Use" (CMU), "Office Mixed Use," "Industrial/Office Mixed Use," and "Secondary Open Space." Overall, as compared to the proposed project, a similar but different mix of land uses would occur. Furthermore, this alternative would reduce the need for coordination with Butte County related to the construction of an off-site stormwater basin located within the County's jurisdiction. As such, under this alternative, project impacts related to land use and planning would also be less than significant, similar to the proposed project.

Noise

The proposed project would have less than significant impacts related to noise with the implementation of MM NOI-1 through MM NOI-3. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce residential development and development within the off-site improvement area. Therefore, construction noise would likely be slightly reduced. Nonetheless, this alternative would similarly be required to incorporate MM NOI-1 through MM NOI-3 to reduce potential noise impacts. As such, impacts would be less than significant with mitigation, but slightly less than the proposed project.

Population and Housing

The proposed project impacts related to population and housing would be less than significant. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area and result in approximately 154 fewer residences. Overall, approximately 1,096 residential units would be constructed; the exact same as those identified in the General Plan. Therefore, population growth would not be considered

unplanned. As such, impacts related to population and housing under the On-site Stormwater Basin Alternative would be less than significant, similar to the proposed project.

Public Services

Project-level and cumulative impacts to public services would be less than significant under the proposed project. Development under the On-site Stormwater Basin Alternative would result less residential units as compared to the proposed project. Because of the decrease in housing, this alternative would likely result in a decreased demand for public services compared to the proposed project. However, like the proposed project, this alternative would be required to pay applicable public services related development fees to accommodate increased public service needs. Therefore, impacts would be less than significant, similar to the proposed project.

Recreation

The proposed project would have less than significant project-level and cumulative impacts related to recreation with the implementation of various mitigation measures identified throughout this EIR, including, but not limited to, MM AIR-1, MM AIR-2, MM AIR-3, MM ENER-1, MM GEO-1, MM NOI-1, MM NIO-2a, MM NIO-2b, and MM NOI-3, which address potential significant impacts related to the construction of on-site recreational facilities. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area. Residences would be reduced by 154 units. The decreased amount of housing included within this alternative would potentially lead to a reduced population increase within the BYSP Area than estimated under the proposed project and therefore a decreased use of and need for recreational facilities. Similar to the proposed project, this alternative would be required to dedicate land and/or pay park facility fees in order to mitigate impacts on parks. Therefore, impacts related to recreation would be less than significant with mitigation and payment of park facilities fees but less than the proposed project.

Transportation and Traffic

The proposed project would have a less than significant project-level and cumulative impact on transportation with the implementation of MM TRANS-2 and MM TRANS-3 and would produce VMT generation rates lower than the applicable threshold for residential and work-related land uses.

The on-site stormwater basin would develop similar uses within the BYSP Area but would reduce development within the off-site improvement area and residences would be reduced by 154 units. This alternative would comply with existing regulations and plans; therefore, similar to the proposed project, impacts related to consistency with transportation plans, geometric design features, and emergency access, would be less than significant. The reduction in housing would result in a decrease in trip generation by 12 percent compared to the proposed project. Despite the reduction in housing, VMT per capita would likely be similar to the proposed project since there is no reduction of internal capture trips. Therefore, it is assumed that impacts would be less than significant, similar to the proposed project.

Utilities and Service Systems

The proposed project would have less than significant project-level and cumulative utility and service system impacts. The On-site Stormwater Basin Alternative would develop similar uses within the BYSP Area, but a reduction of 154 residential units, and reduced development within the off-site improvement area. Because of the slight reduction in units compared to the proposed project, demand for utility and services systems would change accordingly but would still be within that considered and planned for in the General Plan. Like the proposed project, this alternative would be required to pay applicable public utility and services system related development fees to accommodate increased utility and service system demand. As such, impacts would be less than significant, similar the proposed project.

Wildfire

The BYSP Area and off-site improvement area are not located in or near an SRA or VHFHSZ, and project-level and cumulative impacts related to wildfire would not occur. The On-site Stormwater Basin Alternative would be located within the same BYSP Area as the proposed project. As such, no impacts would occur, similar to the proposed project.

6.5.2 - Conclusion

Under the On-site Stormwater Basin Alternative, the BYSP Area would be developed similar to that of the proposed project but with an on-site stormwater basin and a 154 unit residential reduction. Impacts related to aesthetics, energy, land use, population and housing, public services, transportation, and utilities would be less than significant or less than significant with mitigation, similar to the proposed project. Impacts related to agriculture, air quality, biological resources, cultural and tribal cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and recreation would be slightly less compared to the proposed project as a result of the reduced project footprint and/or the reduction in residences. Impacts related to wildfire would not occur, similar to the proposed project. This alternative would meet all project objectives but to a lesser degree compared to the proposed project with respect to the provision of housing.

6.6 - Environmentally Superior Alternative

CEQA Guidelines Section 15126(e)(2) requires identification of an environmentally superior alternative. If the No Project Alternative is environmentally superior, CEQA requires selection of the "environmentally superior alternative other than the No Project Alternative" from among the proposed project and the alternatives evaluated.

The qualitative environmental effects of each alternative in relation to the proposed project are summarized in Table 6-3.

Table 6-3: Summary of Alternatives

Environmental Topic Area	Proposed Project	No Project/No Development Alternative	Reduced Commercial Alternative	On-site Stormwater Basin Alternative
Aesthetics, Light, and Glare	LTS	Less (NI)	Similar (LTS)	Similar (LTS)
Agriculture Resources and Forest Resources	LTS	Less (NI)	Similar (LTS)	Less (LTS)
Air Quality	SUM	Less (NI)	Less (SUM)	Less (SUM)
Biological Resources	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Cultural Resources and Tribal Cultural Resources	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Energy	LTSM	Less (NI)	Similar (LTSM)	Similar (LTSM)
Geology and Soils	LTSM	Less (NI)	similar (LTSM)	Less (LTSM)
Greenhouse Gas Emissions	LTSM	Less (NI)	similar (LTSM)	Less (LTSM)
Hazards and Hazardous Materials	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Hydrology and Water Quality	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Land Use and Planning	LTS	Less (NI)	Similar (LTS)	Similar (LTS)
Noise	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Population and Housing	LTS	Less (NI)	Similar (LTS)	Similar (LTS)
Public Services	LTS	Less (NI)	Similar (LTS)	Similar (LTS)
Recreation	LTSM	Less (NI)	Similar (LTSM)	Less (LTSM)
Transportation and Traffic	LTSM	Less (NI)	Greater (SU)	Similar (LTSM)
Utilities and Service Systems	LTS	Less (NI)	Similar (LTS)	Similar (LTS)
Wildfire	NI	Greater (NI)	Similar (NI)	Similar (NI)

Notes:
LTS = Less than significant
LTSM = Less than significant with mitigation
NI = No impact
SUM = Significant and unavoidable after mitigation

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

As shown in Table 6-1, the No Project/No Build Alternative would result in less impacts compared to the proposed project under all impact areas. However, this alternative would not meet any of the project objectives. Therefore, in accordance with CEQA, another environmentally superior alternative must be selected.

Alternative 2, the Reduced Commercial Alternative would meet all project objectives but would result in greater impacts related to transportation compared to the proposed project. It is conservatively assumed that traffic impacts would be significant and unavoidable.

Alternative 3, the On-Site Stormwater Basin Alternative would develop similar land uses compared to the proposed project; therefore, it would also result in similar impacts related to aesthetics, energy, land use, population and housing, public services, transportation and utilities. However, impacts related to agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and recreation would be slightly less compared to the proposed project. This alternative would meet all project objectives but to a lesser degree due to the reduction in housing units.

As such, the environmentally superior alternative would be Alternative 3, the On-site Stormwater Basin Alternative, as it would meet the project objectives, albeit to a lesser degree, and result in a slight reduction in impacts related to the reduction in residential units and overall project footprint.

6.7 - Alternatives Rejected From Further Consideration

6.7.1 - Increased Open Space Alternative

Under the Increased Open Space Alternative, residential development on-site would be reduced and replaced with additional areas of open space. Medium-Density Residential would be reduced to 500 units and Medium High-Density Residential would be reduced to 400 units. Proposed Primary Open Space would be increased by 2 acres, for a total of 5 acres, and Secondary Open Space would be increased by 2 acres, for a total of 12 acres. While this alternative would reduce significant and unavoidable impacts related to air quality, and reduce daily trips associated with the proposed project, it would not meet the housing goals envisioned in the BYSP Area under the Chico General Plan. As such, this alternative was considered but rejected.

6.7.2 - General Plan Land Use Alternative

Under the General Plan Land Use Alternative, the BYSP Area would be developed in accordance with the land uses envisioned for the site in the Chico General Plan. Land uses would include low-density, medium-density, high-density, and residential mixed-use. Residential areas would be developed as an interconnected series of walkable neighborhoods served by a village center and parks. Additional land uses in the SPA will include office, light industrial, and public uses. This alternative would construct up to approximately 1,096 residential units (154 less than the proposed project) and approximately 403,882 square feet of commercial space including the proposed 150,000 square feet of adaptive reuse of the Warehouse, Engineering Building, and Shop. While this alternative would be specifically consistent with the Chico General Plan, it would not reduce significant and unavoidable impacts related to air quality, would increase daily trips and associated emissions, and would result in fewer residences than the proposed project, thus not meeting all of the objectives of the proposed project. As such, this alternative was considered but rejected.

6.7.3 - On-site Drainage with No Comanche Creek Outfall Alternative

Under this alternative, the proposed project's drainage would not be constructed in the off-site improvement area located within the County but would be wholly contained within the BYSP Area within the City of Chico. Unlike Alternative 3, drainage would not be directed to Comanche Creek and instead would be directed to surface stormwater drainage facilities directly west and south of the BYSP Area. This alternative would avoid development on Prime Farmland within the off-site improvement area and slightly reduce air quality impacts associated with construction emissions because of the reduced footprint similar to Alternative 3. Commercial and or residential space would be reduced by approximately 4 acres to accommodate an on-site drainage basin. While this alternative would avoid development on Prime Farmland and reduce air quality impacts, it would reduce housing and commercial development envisioned in the BYSP Area under the Chico General Plan. Furthermore, the surface stormwater drainage facilities off-site would have the potential to result in off-site flooding as a result of the proposed project's stormwater discharge. This alternative would meet most of the project objectives, but to a lesser degree than the proposed project, and would have the potential to result in increased flooding impacts. As such, this alternative was considered but rejected.

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