Willowgrove Project

SCH# 2024070522

Draft Environmental Impact Report

Prepared for
City of Davis

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Prepared by
RANEY PLANNING & MANAGEMENT, INC.
25 years
1501 Sports Drive, Suite A, Sacramento, CA 95834

Willowgrove Project
Draft Environmental Impact Report

SCH# 2024070522

Lead Agency

City of Davis
23 Russell Boulevard,
Davis, CA, 95616

Eric Lee
Senior Planner
(530) 757-5610

Prepared By

Raney Planning and Management, Inc.
1501 Sports Drive, Suite A
Sacramento, CA 95834
(916) 372-6100

Contact:
Nick Pappani
Vice President

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1. Introduction

1. INTRODUCTION

1.1 TYPE AND PURPOSE OF THE EIR

The Willowgrove Project, formerly the Shriners Property Project, Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, Public Resources Code (PRC) Sections 21000-21189, as amended, and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations (CCR) Title 14, Sections 15000-15387 (CEQA Guidelines). The City of Davis is the lead agency for the environmental review of the Willowgrove Project (proposed project) evaluated herein and has the principal responsibility for approving the proposed project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives that reduce environmental effects. The public agency shall consider the information in the EIR along with other information that may be presented to the agency and must certify the EIR prior to taking action on the project entitlements.

As provided in the CEQA Guidelines Section 15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues. CEQA requires the preparation of an EIR prior to approval of any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the City has determined that the proposed development is a *project* within the definition of CEQA, which has the potential for resulting in significant environmental effects.

The lead agency is required to consider the information in the EIR along with any other available information in deciding whether to approve the proposed project. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth-inducing impacts, and cumulative impacts.

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a *project-level EIR* pursuant to CEQA Guidelines Section 15161, which is an analysis that examines the environmental impacts of a specific development project. A *project-level EIR* focuses primarily on the changes in the environment that would result from the development of the project, and examines all phases of the project, including planning, construction, and operation. The focus of the EIR, and the topics addressed herein, are described under Section 1.5, Scope of the EIR, of this chapter, below.

1.2 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

“Responsible agency” means a public agency that proposes to carry out or approve a project for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purpose of CEQA, the term responsible agency includes all California public agencies other than the lead

agency that have discretionary approval power over the project or an aspect of the project. The Central Valley Regional Water Quality Control Board (RWQCB), Yolo-Solano Air Quality Management District (YSAQMD), Yolo Habitat Conservancy, and Yolo Local Agency Formation Commission (LAFCo) are identified as potential responsible agencies.

"Trustee agency" means a State agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. The only known possible trustee agency is the California Department of Fish and Wildlife (CDFW).

Although not subject to California law and, thus, outside the definitions of responsible agency or trustee agency, the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), and Federal Emergency Management Agency (FEMA) may also be called upon to grant approvals under federal law necessary for the development of the proposed project. The above agencies do not have duties under CEQA but, rather, are governed by a variety of federal statutes, such as the Clean Water Act, which governs the dredging and filling of waters of the U.S. (e.g., wetlands), and the federal Endangered Species Act, which requires USACE to consult with the USFWS as part of the review process for any wetland or fill permits that may be required.

1.3 PROPOSED PROJECT SUMMARY

A summary of the project location, description, and approvals is provided below. Please refer to Chapter 3, Project Description, of this EIR for a detailed description of the proposed project and entitlements, as well as a list of the project objectives.

Project Location and Setting

The approximately 232-acre project site, identified by Assessor's Parcel Number (APN) 071-130-007, is located north of the intersection of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis, California. The project site is located outside of the City of Davis City Limits and the City of Davis Sphere of Influence (SOI) and within the unincorporated area of Yolo County. The Yolo County General Plan designates the project site as Agricultural (AG) and the site has a Yolo County zoning designation of Agricultural Intensive (A-N). The project site is situated in Sections 1 and 2 of Township 8 North and Range 2 East, as depicted on the U.S. Geological Survey (USGS) Davis, CA 7.5-minute quadrangle map. The approximate center of the project site is at latitude 38.5695584 and longitude -121.7081286, NAD 83, and is located at an elevation of approximately 33 feet above mean sea level (amsl).

The project site consists of generally flat land currently used for agricultural activities with approximately 230.6 acres historically and currently planted with row crops. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately 5 to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

In the northwestern portion of the project site, an existing road crossing allows agricultural operations to continue from Channel A to the northern boundary of the project site. A City-owned public trail easement on the Gill property is located northeast of the project site. A public trail is also located to the west of the project site within the Wildhorse Agricultural Buffer. An existing

grade-separated crossing that allows bicyclists and pedestrians to cross under East Covell Boulevard is located to the southwest of the project site.

The project site is bounded by East Covell Boulevard to the south; the 135-foot-wide Wildhorse Agricultural Buffer to the west; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences associated with Mace Ranch and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south, across East Covell Boulevard.

Project Description

In general, the proposed project would consist of a mixed-use community, including a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences. The residential units would be developed across the project site, totaling approximately 104.7 acres of residential uses, and would consist of Residential Low Density (LDR), Residential Medium Density (MDR), and Residential High Density (HDR) neighborhoods. The proposed project would include transit improvements; neighborhood retail uses; a daycare facility; associated on-site roadway improvements; utility improvements; recreational uses, such as a community park, mini park, a gym, open space, and greenbelts; and off-site improvements. Approximately 8.7 acres of neighborhood greenbelts would be located throughout the project site and an Urban Agricultural Transition Area (UATA) would be located along the northern and eastern boundary of the site. The UATA would include open space trail connections to the existing Wildhorse Agricultural Buffer to the west of the project site and 10-foot wide shared-use paths connecting to existing City of Davis trails to the west and northeast of the project site and water detention basins.

Primary site access would be provided from East Covell Boulevard. From East Covell Boulevard, Alhambra Drive would be extended into the site from the existing intersection in a north-to-south direction. In addition, a new intersection would be constructed from East Covell Boulevard in the southeastern portion of the project site. Both entry streets would extend into the project site around the proposed community park, and would include traffic circles at the first internal intersections connecting to the modified local street and collector street. In addition, the proposed project would include a multimodal network of bikeways, sidewalks, and transit stops. The proposed sidewalks and shared-use paths would connect to existing off-site City of Davis trails located to the north, west, and south of the project site. Overall, the proposed project would include over three miles of shared-use trails, adding to the City's bikeway and greenbelt systems.

The proposed project would require discretionary approvals, including an Amendment of the City's Sphere Of Influence (SOI), Annexation of the 232-acre project site into the City of Davis, a General Plan Amendment, Pre-zoning of the project site to City of Davis zoning designation, Final Planned Development for site development standards, Large Lot and Small Lot Vesting Tentative Maps, and a Development Agreement. The SOI Amendment and Annexation are ultimately subject to approval by the Yolo LAFCo. The City of Davis would be responsible for approving a resolution authorizing the project applicant to submit an SOI Amendment and Annexation application to Yolo LAFCo.

The details of the proposed project, including required approvals, are described in further detail in Chapter 3, Project Description, of this EIR.

1.4 EIR PROCESS

The EIR process begins with the decision by the lead agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the lead agency sends a Notice of Preparation (NOP) to appropriate government agencies and, when required, to the State Clearinghouse (SCH) in the Office of Land Use and Climate Innovation (LCI), which will ensure that responsible and trustee State agencies reply within the required time. Please see Section 1.7 regarding the NOP process for the proposed project. The SCH assigns an identification number to the project, which then becomes the identification number for all subsequent environmental documents on the project. Commenting agencies have 30 days to respond to the NOP and provide information regarding alternatives and mitigation measures they wish to have explored in the Draft EIR and to provide notification regarding whether the agency will be a responsible agency or a trustee agency for the project.

As soon as the Draft EIR is completed, a Notice of Completion will be filed with the SCH and a public notice of availability will be published to inform interested parties that a Draft EIR is available for agency and public review. In addition, the notice provides information regarding the location of copies of the Draft EIR available for public review and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a period of 45 days, during which time reviewers may submit comments on the document to the lead agency. The lead agency must respond to comments in writing. If significant new information, as defined in CEQA Guidelines Section 15088.5, is added to an EIR after public notice of availability is given but before certification of the EIR, the revised EIR or affected chapters must be recirculated for an additional public review period with related comments and responses.

A Final EIR will be prepared, containing comments and responses to comments on the Draft EIR. The Final EIR will also include any changes to the Draft EIR text made as a result of public comment, as warranted. The Final EIR will also include the Mitigation Monitoring Program (MMP) prepared in accordance with PRC Section 21081.6. Before approving a project, the lead agency must certify that the Final EIR has been presented to the decision-making body of the lead agency, which has reviewed and considered the EIR. The lead agency shall also certify that the Final EIR reflects the lead agency's independent judgment and analysis.

Pursuant to CCR Title 14, Section 15091, a public agency shall not approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The findings prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA. If the decision-making body elects to proceed with a project that would have unavoidable significant impacts, then a Statement of Overriding Considerations explaining the decision to balance the benefits of the project against unavoidable environmental impacts must be prepared.

1.5 SCOPE OF THE EIR

An Initial Study has not been prepared for the proposed project, as the EIR addresses all CEQA-required environmental topics identified in the CEQA Guidelines. The following environmental issue areas are addressed in the EIR:

- Aesthetics;

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

In addition to the foregoing resource areas, Chapter 5, Effects Not Found to be Significant, has been prepared to present information regarding resource areas that do not have the potential to be affected by the proposed project.

The evaluation of effects is presented on a resource-by-resource basis in Chapters 4.1 through 4.15 of the EIR. Each chapter is divided into the following four sections: Introduction, Existing Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures. Impacts that are determined to be significant in Chapters 4.1 through 4.15, and for which feasible mitigation measures are not available to reduce those impacts to a less-than-significant level, are identified as *significant and unavoidable*. Chapter 5 of the EIR presents a discussion of the environmental effects not found to be significant. Chapter 6 of the EIR presents a discussion of growth-inducing impacts, summary of cumulative impacts, and significant irreversible environmental changes associated with the project. Alternatives to the proposed project are discussed in Chapter 7 of the EIR.

1.6 DEFINITION OF BASELINE

According to CEQA Guidelines Section 15125, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the “baseline physical conditions” against which project-related changes can be compared. In addition, CEQA Guidelines Section 15126.2(a) states that an EIR shall identify and focus on the significant environmental effects of the proposed project. The CEQA Guidelines Section 15126.2(a) states:

> An EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the Lead Agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

Normally, the baseline condition is the physical condition that exists when the NOP is published. The NOP for the proposed project was published on July 12, 2024. Therefore, conditions existing at that time are considered to be the baseline against which changes that would result from the proposed project are evaluated. Impacts could include both direct and indirect physical changes to the baseline condition. The baseline condition for the project site is described in Chapter 3,

Project Description, of this EIR. The baseline conditions pertaining to each resource area are described in the "Existing Environmental Setting" sections throughout this EIR.

1.7 NOTICE OF PREPARATION AND SCOPING

In accordance with CEQA Guidelines Section 15082, an NOP was circulated to the public, local, State and federal agencies, and other known interested parties from July 12, 2024, to August 12, 2024, for a total of 30 days (see Appendix A of this EIR). The purpose of the NOP was to provide notification that an EIR for the proposed project was being prepared and to solicit public input on the scope and content of the document.

In addition, the City of Davis held an NOP scoping meeting for the EIR during the NOP review period on July 25, 2024, for the purpose of receiving comments on the scope of the environmental analysis to be prepared for the proposed project. Agencies and members of the public were invited to attend and provide input on the scope of the EIR. All comments were taken into consideration during the preparation of this EIR. A summary of the NOP comments received, including the comments received at the NOP scoping meeting, is provided in Section 1.8 below.

1.8 SUMMARY OF COMMENTS RECEIVED ON THE NOP

During the NOP public review period from July 12, 2024, to August 12, 2024, the City of Davis received 25 comment letters. At the public scoping meeting on July 25, 2024, five written comments were received. A copy of each comment letter and written comment is provided in Appendix B of this EIR. The comment letters and written comments received were issued by the following representatives of public agencies and groups, as well as individual members of the general public:

Public Agencies

- California Department of Transportation – Gary S. Arnold;
- Central Valley Flood Protection Board – Andrea Buckley;
- Central Valley RWQCB – Peter Minkel;
- Department of Toxic Substances Control – Tamara Purvis;
- Native American Heritage Commission (NAHC) – Pricilla Torres-Fuentes;
- FEMA – Edith C. Lohmann;
- Yolo County Department of Community Services – Stephanie Cormier;
- Yolo Habitat Conservancy – Charlie Tschudin;
- Yolo LAFCo – Christine Crawford (3); and
- Yolo Transportation District – Brian Abbanat.

Groups

- Sierra Club Yolano Group.

Residents

- Alex Achimore (2);
- Ari Halberstadt;
- Barbara Clutter;
- Ben Young;
- Connor Gorman;
- David Nisson;

- David J. Thompson;
- Gayne Lamb-Bang;
- Greg Francis;
- Jean Haymond Sugarman;
- Jeff Tweddale;
- Mary Nisson;
- Rena Nayyar;
- Sara May;
- Tamara Range; and
- Viki Link.

The following list, categorized by issue, summarizes the environmental concerns brought forth in the comment letters and written comments received on the scope of the EIR. Comments outside of the purview of CEQA or that are speculative in nature have not been included, as, according to Section 15145 of CEQA Guidelines, CEQA does not require evaluation of speculative impacts.

Project Description (Chapter 3)	Concerns related to: • Use of the latest City Boundary and SOI map provided by LAFCo in the Draft EIR. • Inclusion of off-site easements or infrastructure required for the proposed project. • The SOI amendment and Annexation LAFCo process.
Aesthetics (Chapter 4.1)	Concerns related to: • The proposed project's visual character and consistency with City standards.
Agricultural Resources (Chapter 4.2)	Concerns related to: • Compliance with Yolo LAFCo policies, including policies related to conversion of Agricultural land. • Increasing the agricultural buffer from the minimum required distance. • Compliance with the County's Right-to-Farm Ordinance.
Air Quality, Greenhouse Gas Emissions, and Energy (Chapter 4.3)	Concerns related to: • Potential air quality impacts resulting from conversion of farmland. • Potential greenhouse gas emissions (GHG) resulting from construction activities. • Energy consumption over the lifetime of the proposed project. • Consistency with the City's climate goals, as documented in the City's Climate Action and Adaptation Plan (CAAP). • Air quality impacts associated with an increased number of vehicle trips. • Generation of significant GHG emissions. • Inclusion of GHG reduction measures consistent with City's CAAP within a Transportation Demand Management (TDM) program. • Provision of a renewable energy microgrid to reduce emissions. • The provision of adequate electric vehicle (EV) charging infrastructure.
Biological Resources (Chapter 4.4)	Concerns related to: • Ensuring ground disturbance does not occur before a biological study is completed. • Impacts to protected wildlife and plant species. • Ensuring surveys for biological resources are performed by specialists approved under CEQA guidelines and CDFW protocols.

Biological Resources (Chapter 4.4)	• Consistency with the Yolo Regional Resource Conservation Investment Strategy/Land Conservation Plan (RCIS/LCP) and Yolo Habitat Conservancy and Natural Community Conservation Plan (HCP/NCCP). • Development of known floodplain areas, vernal pools, or other sensitive habitat.
Cultural and Tribal Cultural Resources (Chapter 4.5)	Concerns related to: • Tribal consultation pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18. • Notification to and consultation with the Yoche Dehe Wintun Nation and other tribal groups.
Hazards and Hazardous Materials (Chapter 4.7)	Concerns related to: • Potential hazards associated with agricultural land uses in the site vicinity, specifically the potential for presence of pesticides and organochlorine pesticides (OCPs). • Potential hazards associated with mixing/loading/storage areas, drainage ditches, farmhouses, or other buildings in the site vicinity. • Potential hazards related to imported soil and fill materials and the appropriate testing of such materials for potential contaminants of concern (COCs).
Hydrology and Water Quality (Chapter 4.8)	Concerns related to: • Conducting a hydrology and hydraulic analysis related to the current capacity of Davis Drain. • Incorporation of improvements and conveyance through culverts which discharge in the Willow Slough bypass. • Ensuring off-site runoff does not increase, especially regarding flows to Davis Drain, Willow Creek Tributary, or Channel A. • Impacts associated with constructing in a floodplain, including contributions to flood risks in the rest of the City. • Inclusion of a 200-year flood event analysis and a 100-year flood event analysis within the drainage report. • Incorporation of flood zone features, such as elevated foundations. • Ability to efficiently use water, maintain water quality, and avoid impacts to water supply. • Contaminants in stormwater and the associated impacts to people, wildlife, and groundwater. • Impacts to the quality of surface and groundwater.
Land Use and Planning (Chapter 4.9)	Concerns related to: • The building height of the high-density units that back onto East Covell Boulevard. • Implementation of an agreed-upon tax sharing agreement for public services prior to project approval.
Noise (Chapter 4.10)	Concerns related to: • Ambient noise levels associated with sound guns used to scare off birds from the landfill to the north and from agricultural operations to the northeast.
Public Services/Recreation (Chapter 4.12)	Concerns related to: • Provision of open space and recreational facilities in the project site vicinity. • Provision of open space areas on the west side of the site between the Wildhorse residential area and new development.
Transportation (Chapter 4.13)	Concerns related to:

Transportation (Chapter 4.13)	• Inclusion of residential and non-residential trip generation rates for the weekday, weekday AM peak hour, and weekday PM peak hour using the latest methodologies of the ITE Trip Generation Handbook. • Coordination with staff at Yolobus/Yolo Transportation District and Unitrans on the configuration of the proposed bus stop along the proposed project's frontage. • Evaluation of emergency evacuation as part of the EIR. • Inclusion of payment of fair-share fees towards proposed interchange improvements. • Provision of a traffic impact study (TIS) which would evaluate vehicle miles traveled (VMT) as well as the safety impact on I-80, Mace Boulevard, and State Route (SR) 113/West Covell Boulevard interchanges for existing and cumulative conditions. • Identification and calculation of potentially required transportation impact fees. • Potential cumulative traffic impacts resulting from the development of Village Farms and Palomino Place housing developments, as well as the currently inactive On the Curve housing development. • Accurate assessment of VMT and other impacts related to traffic. • Traffic increases on County roads within the vicinity of the site. • Transportation mitigation should minimize walking distance to public transit. • Preparation of a TDM plan. • Bicycle facilities and infrastructure, including accessible sidewalks, throughout the project site. • Potential safety hazards on East Covell Boulevard. • Provision of pedestrian crossing lights, stop lights, and a roundabout on East Covell Boulevard to reduce potential safety hazards. • Provision of an access road to the north of the site.
Alternatives Analysis (Chapter 7)	Concerns related to: • Consideration of a Higher Number of Units – Same Footprint Alternative, including a minimum of 1,500 units. • Consideration of an alternative consisting of an additional lane in each direction on East Covell Boulevard and Mace Boulevard from the narrowing near Harper Junior High School to the intersection at 2nd Street where Mace Boulevard becomes four lanes. • Consideration of high-density and mixed-density alternatives. • Consideration of alternatives which include affordable housing for farmworkers.

The above CEQA-related issues are addressed in this EIR, in the relevant sections identified in the first column.

1.9 DRAFT EIR AND PUBLIC REVIEW

This Draft EIR is being circulated for public review and comment for a period of 45 days. During this period, the general public, organizations, and agencies can submit comments to the Lead Agency on the Draft EIR's accuracy and completeness. Release of the Draft EIR marks the beginning of a 45-day public review period pursuant to CEQA Guidelines Section 15105.

The public can review the Draft EIR through the City's website at:

https://www.cityofdavis.org/city-hall/community-development/development-projects/willowgrove

or at the following address during normal business hours:

City of Davis
Department of Community Development
23 Russell Blvd, Suite 2
Davis, CA 95616

All comments or questions regarding the Draft EIR should be submitted in written form and addressed to:

Eric Lee, Senior Planner
City of Davis, Department of Community Development
(530) 757-5610
elee@cityofdavis.org

1.10 ORGANIZATION OF THE DRAFT EIR

The EIR is organized into the following sections:

Chapter 1 – Introduction

Provides an introduction and overview describing the intended use of the EIR and the review and certification process, as well as summaries of the chapters included in the EIR and summaries of the issues and concerns received from the public and public agencies during the NOP review period.

Chapter 2 – Executive Summary

Summarizes the elements of the project and the environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures and indicates the level of significance of impacts after mitigation. In addition, the Executive Summary chapter includes a summary of the alternatives to the proposed project, and areas of known controversy.

Chapter 3 – Project Description

Provides a detailed description of the proposed project, including the location, background information, major objectives, and technical characteristics of the proposed project.

Chapter 4 – Existing Environmental Setting, Impacts, and Mitigation

Contains a project-level and cumulative analysis of environmental issue areas associated with the proposed project. The section for each environmental issue contains an introduction and description of the setting of the project site, identifies impacts for both the proposed project, and recommends appropriate mitigation measures.

Chapter 5 – Effects Not Found to be Significant

The Effects Not Found to be Significant chapter of the EIR addresses the project's effects that were determined not to be significant for the proposed project. CEQA Guidelines Section 15128 requires a brief discussion explaining why these effects were not found to be significant.

Chapter 6 – Statutorily Required Sections

The Statutorily Required Sections chapter of the EIR provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

Chapter 7 – Alternatives Analysis

The Alternatives Analysis chapter of the EIR describes and evaluates a reasonable range of alternatives to the proposed project. The alternatives are analyzed at a level of detail less than that of the proposed project; however, the analyses include sufficient detail to allow for a meaningful comparison of impacts.

Chapter 8 –EIR Authors and Persons Consulted

The EIR Authors and Persons Consulted chapter of the EIR lists EIR and technical report authors who provided technical assistance in the preparation and review of the EIR.

Chapter 9 – References

The References chapter of the EIR provides bibliographic information for all references and resources cited.

Appendices

The Appendices include the NOP, comments received during the NOP comment period, and technical reports prepared for the proposed project.

2. Executive Summary

2. EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Executive Summary chapter of the EIR provides an overview of the proposed project (see Chapter 3, Project Description, for further details) and provides a table summary of the conclusions of the environmental analysis provided in Chapters 4.1 through 4.15. This chapter also summarizes the alternatives to the proposed project that are described in Chapter 7, Alternatives Analysis, and identifies the Environmentally Superior Alternative. Table 2-1 contains the environmental impacts associated with the proposed project, the significance of the impacts, the proposed mitigation measures for the impacts, and the significance of the impacts after implementation of the mitigation measures.

2.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The approximately 232-acre project site, identified by Assessor's Parcel Number (APN) 071-130-007, is located north of the intersection of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis, California. The project site is located outside of the City of Davis City Limits and the City of Davis Sphere of Influence (SOI) and within the unincorporated area of Yolo County. The Yolo County General Plan designates the project site as Agricultural (AG) and the site has a Yolo County zoning designation of Agricultural Intensive (A-N).

The project site consists of generally flat land currently used for agricultural activities with approximately 230.6 acres historically and currently planted with row crops. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. Aerial imagery indicates hayfields and crops have been cultivated on the site for at least the past 35 years. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately five to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

In the northwestern portion of the project site, an existing road crossing allows agricultural operations to continue from Channel A to the northern boundary of the project site. A City-owned public trail easement on the Gill Orchard Easement is located northeast of the project site. A public trail is also located to the west of the project site within the Wildhorse Agricultural Buffer. An existing grade-separated crossing that allows bicyclists and pedestrians to cross under East Covell Boulevard is located to the southwest of the project site.

The project site is bounded by East Covell Boulevard to the south; the approximately 200-foot-wide Wildhorse Agricultural Buffer to the west; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south, across East Covell Boulevard.

The proposed project would include the development of a mixed-use community, including a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences across various residential neighborhoods. In addition, the proposed project would include transit improvements; neighborhood retail uses; a daycare facility; associated on-site roadway improvements; utility improvements; recreational uses, such as a community park, mini park, and a gym, open space, and greenbelts; and off-site improvements.

Primary site access would be provided from East Covell Boulevard. From East Covell Boulevard, Alhambra Drive would be extended into the site from the existing intersection in a north-to-south direction. In addition, a new intersection would be constructed from East Covell Boulevard in the southeastern portion of the project site. Both entry streets would extend into the project site around the proposed community park, and would include traffic circles at the first internal intersections connecting to the modified local street and collector street. Modified local streets would extend into the project site from the collector and entry streets.

The proposed project would include a multimodal network of bikeways, sidewalks, and transit stops including six-foot-wide sidewalks along all internal streets; ten-foot-wide shared-use pedestrian paths along the entry streets and modified local streets; a pedestrian path within the proposed Urban Agricultural Transition Area (UATA); a 14-foot-wide shared use path within the proposed North Central Greenbelt; and installation of two new transit connections located along the frontage of the project site along East Covell Boulevard.

The proposed project would include various off-site improvements, including construction of a 400-foot eastbound left-turn lane at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection, as well as a 250-foot westbound right-turn lane at the East Covell Boulevard/Alhambra Drive/Westerly Project Access. Under the cumulative scenario evaluated in the traffic study for the proposed project, it was determined that a second westbound travel lane on East Covell Boulevard would be required along the entire project frontage. In lieu of the above turn lane improvements required in the near-term, the alternative would be to advance the construction of the second westbound lane along the project's frontage. Additionally, the proposed project would also include four new pedestrian connections to the existing trail within the adjacent Wildhorse Agricultural Buffer, as well as off-site connections to existing water and sewer lines.

The proposed project would require City of Davis approval of the following entitlements:

- Certification of the EIR;
- Adoption of a Mitigation Monitoring Plan;
- Sphere of Influence (SOI) Amendment;
- Annexation;
- General Plan Amendment;
- Pre-zoning;
- Final Planned Development;
- Design Review;
- Small and Large Lot Vesting Tentative Maps;
- Affordable Housing Plan; and
- Development Agreement.

In addition to the above City approvals, the proposed project would also require the following approvals from the Yolo Local Agency Formation Commission (LAFCo), as a Responsible Agency, as part of the requested SOI Amendment and Annexation:

- SOI Amendment in order to bring the project site within the City of Davis SOI (Government Code Section 56428); and
- Annexation of the entire 232-acre project site into the City of Davis (Government Code Section 56737).

The 232-acre project site is currently located within the East Davis Fire Protection District. The East Davis Fire Protection District encompasses a portion of eastern Yolo County, largely east of the City of Davis and west of the City of West Sacramento. The East Davis Fire Protection District consists of mostly agricultural land uses. Annexation of the project site to the City of Davis would also require Yolo County LAFCo approval of detachment of the project site from the East Davis Fire Protection District, as the City of Davis Fire Department would provide fire protection services to the project site upon Annexation.

Please refer to Chapter 3, Project Description, of this EIR for a detailed description of the proposed project and entitlements, as well as a full list of the project objectives.

2.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Mitigation measures must be implemented as part of the proposed project to reduce potential adverse impacts to a less-than-significant level. Such mitigation measures are noted in this EIR and are found in the following technical chapters: Aesthetics; Agricultural Resources; Air Quality, Greenhouse Gas Emissions, and Energy; Biological Resources; Cultural and Tribal Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Transportation; and Utilities and Service Systems. The mitigation measures required for the proposed project, as presented in this EIR, will form the basis of the Mitigation Monitoring Plan. Any impact that remains significant after implementation of mitigation measures is considered a significant and unavoidable impact.

A summary of the proposed project's impacts identified for each technical chapter (Chapters 4.1 through 4.15) of the EIR is presented in Table 2-1 at the end of this chapter. In addition, Table 2-1 includes the level of significance of each impact, any mitigation measures required for each impact, and the resulting level of significance after implementation of mitigation measures for each impact.

2.4 SUMMARY OF PROJECT ALTERNATIVES

The following section presents a summary of the alternatives evaluated in this EIR for the proposed project, which include the following:

- No Project (No Build) Alternative;
- Lower Number of Units – Same Footprint Alternative;
- Same Number of Units – Smaller Footprint Alternative;
- Same Number of Units – Smallest Footprint Alternative; and

- Higher Number of Units – Same Footprint Alternative.

The following summary provides brief descriptions of the five alternatives to the proposed project that are evaluated in this EIR. For a more thorough discussion of project alternatives, please refer to Chapter 7, Alternatives Analysis.

No Project (No Build) Alternative

The No Project (No Build) Alternative assumes the current conditions of the project site would remain, and the site would not be developed. As described in this EIR, the project site consists of generally flat, agricultural land. A City of Davis drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Under the No Project (No Build) Alternative, the existing on-site agricultural operations would be anticipated to continue. As such, under the Alternative, the entire project site is conservatively assumed to be subject to continuous disturbance related to discing, planting, and harvesting. The No Project (No Build) Alternative would not meet the majority of the project objectives. Because the No Project (No Build) Alternative would preserve the existing agricultural uses on-site, the Alternative would partially meet Objective #7 related to respecting existing agricultural uses. However, the Alternative would not fully meet Objective #7, as agricultural buffers would not be required. Because changes would not occur to the project site under the No Project (No Build) Alternative and agricultural operations would continue, impacts would not occur related to the majority of issue areas, and impacts related to Air Quality, Greenhouse Gas (GHG) Emissions, and Energy, Biological Resources, Cultural and Tribal Cultural Resources, Noise, and Utilities and Service Systems would be fewer as compared to the proposed project, and mitigation would not be required.

Lower Number of Units – Same Footprint Alternative

The Lower Number of Units – Same Footprint Alternative would consist of the development of 937 dwelling units, on the same development footprint as the proposed project resulting in an overall reduction of 313 residential units as compared to the proposed project. This Alternative would include a reduction in 315 high density residential (HDR) units as compared to the proposed project, while still retaining the affordable housing parcel located in the southwest corner of the project site. The Alternative would result in a net residential density of approximately 9.3 dwelling units per acre (du/ac), as compared to the 11.9 du/ac net residential density associated with the proposed project. Similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would include the development of transit improvements; a daycare facility within the HDR parcel; associated on-site roadway improvements; utility improvements; recreational uses, open space, and greenbelts; and off-site improvements.

Because the Alternative would include a reduced density as compared to the proposed project and because the Alternative would not include development of a community park or retail uses the Lower Number of Units – Same Footprint Alternative would not meet Objectives #6, #9, and #13 and would be less successful in meeting Objectives #4 and #5. Nevertheless, because the Lower Number of Units – Same Footprint Alternative would include development of the project site with the same types of uses, the majority of the project objectives would generally be met. The significant impacts that would be reduced under the Alternative are as follows:

- Conflict with or obstruct implementation of the applicable air quality plan during project operation (remains significant and unavoidable);

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (remains significant and unavoidable);
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation (remains significant and unavoidable);
- Be located on a geological 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, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial risks to life or property;
- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure) (remains significant and unavoidable);
- Cumulative unplanned population growth (remains significant and unavoidable);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. (remains significant and unavoidable);
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments (remains significant and unavoidable); and
- Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City of Davis General Plan (remains significant and unavoidable).

Though the abovementioned significant and unavoidable impacts would be reduced under the Lower Number of Units – Same Footprint Alternative, the associated mitigation measures would still be required, and the impacts would remain significant and unavoidable. Overall, the majority of other impacts would be similar under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project, including the other identified significant and unavoidable impacts. Because residential density would decrease under the Lower Number of Units – Same Footprint Alternative, the significant and unavoidable impacts related to vehicle miles traveled (VMT) would increase in severity.

Same Number of Units – Smaller Footprint Alternative

The Same Number of Units – Smaller Footprint Alternative would consist of buildout of the same land uses included with the proposed project on a reduced development footprint in order to avoid, to the extent feasible, conversion of on-site high-quality agricultural land with non-agricultural uses, and to reduce residential VMT. The Alternative would include a total of 1,250 units on a 170-acre development footprint, which represents a reduction in development area of approximately 62 acres. The Alternative would result in a net residential density of approximately

16.6 du/ac, as compared to the 11.9 du/ac net residential density associated with the proposed project.

The Same Number of Units – Smaller Footprint Alternative would fully meet Objectives #6, #7, #8, #10, and #11. However, because the Alternative would not include development of a community park, urban forest, or retail uses, Objectives #9, #13, and #14 would not be met. Furthermore, the Alternative would be less successful in meeting the remaining project objectives. The significant impacts that would be reduced under the Alternative are as follows:

- In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality (remains significant and unavoidable);
- Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout of the City of Davis General Plan (remains significant and unavoidable);
- 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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A (remains significant and unavoidable);
- Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use (remains significant and unavoidable);
- Conflict with or obstruct implementation of the applicable air quality plan during project operation (remains significant and unavoidable);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (remains significant and unavoidable);
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation (remains significant and unavoidable);
- Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee;
- Have a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly;
- Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle;
- Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake;
- Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird;

- Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl;
- Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk or white-tailed kite;
- Have a substantial adverse effect, either directly or through habitat modifications, on northern harrier, other nesting birds, and other raptors protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC);
- Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS);
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands or impacting individual trees;
- Cumulative loss of habitat for special-status species;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code (PRC) Section 21074;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction;
- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations;
- Substantially alter the existing drainage patter n 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or 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; and
- 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 impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.

Though the abovementioned significant and unavoidable impacts would be reduced under the Same Number of Units – Smaller Footprint Alternative, the associated mitigation measures would still be required, and the impacts would remain significant and unavoidable. Impacts related to Biological Resources, Cultural and Tribal Cultural Resources, and Hydrology and Water Quality would be generally reduced under the Same Number of Units – Smaller Footprint Alternative. Overall, the majority of other impacts would remain similar to the proposed project under the Same Number of Units – Smaller Footprint Alternative, including the other identified significant and unavoidable impacts.

Same Number of Units – Smallest Footprint Alternative

The Same Number of Units – Smallest Footprint Alternative would consist of buildout of HDR uses on a reduced development footprint in order to further avoid, to the extent feasible, conversion of on-site high-quality agricultural land with non-agricultural uses, and to further reduce residential VMT. The Alternative would include a total of 1,250 units on a 100-acre development footprint, which represents a reduction in development area of approximately 132 acres. To accommodate the same number of units on the smallest possible development footprint, the Same Number of Units – Smallest Footprint Alternative would only provide HDR units. To accommodate 1,250 units on the reduced development footprint, six-story double-loaded corridor buildings with multiple four-story buildings, which would consist entirely of apartments, not ownership condominiums, would be required.

The Same Number of Units – Smallest Footprint Alternative would fully meet Objectives #6, #7, #8, #10, and #11. However, because the Alternative would not include development of a community park, urban forest, or retail uses, Objectives #9, #13, and #14 would not be met. Furthermore, the Alternative would be less successful in meeting the remaining project objectives. The significant impacts that would be reduced under the Alternative are as follows:

- 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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A (remains significant and unavoidable);
- Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use (remains significant and unavoidable);
- Conflict with or obstruct implementation of the applicable air quality plan during project operation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation (remains significant and unavoidable);
- Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee;
- Have a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly;
- Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle;
- Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake;
- Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird;

- Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl;
- Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk or white-tailed kite;
- Have a substantial adverse effect, either directly or through habitat modifications, on northern harrier, other nesting birds, and other raptors protected under the MBTA and CFGC;
- Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands or impacting individual trees;
- Cumulative loss of habitat for special-status species;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction;
- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations;
- 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or 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;
- 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 impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); and
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.

Though the abovementioned significant and unavoidable impacts would be reduced under the Same Number of Units – Smallest Footprint Alternative, the associated mitigation measures would still be required, and the impacts would remain significant and unavoidable. However, significant and unavoidable impacts related to VMT would be reduced to less than significant under the Alternative. Impacts related to Biological Resources, Cultural and Tribal Cultural Resources, and Hydrology and Water Quality would be generally reduced under the Same

Number of Units – Smallest Footprint Alternative. Overall, the majority of other impacts would remain similar to the proposed project under the Same Number of Units – Smallest Footprint Alternative, including the other identified significant and unavoidable impacts. Because the six-story buildings along East Covell Boulevard would block the views of the northerly portion of the site, significant and unavoidable impacts related to aesthetics would be greater under the Same Number of Units – Smallest Footprint Alternative.

Higher Number of Units – Same Footprint Alternative

Under the Higher Number of Units - Same Footprint Alternative, the same non-residential uses as the Proposed Project would be included. However, the Alternative would also include the additional development of 236 residences, for a total of 1,486 residential units. As such, the residential density under the Alternative would increase to approximately 15.5 du/ac, correlating to decreased impacts to Air Quality, GHG Emissions, and Transportation.

Because the Higher Number of Units – Same Footprint Alternative would include development of the project site with the same uses included in the proposed project, the majority of the project objectives would be met. However, because the Higher Number of Units – Same Footprint Alternative would include the development of a greater number of residential units than the proposed project with a reduced number of low density residential (LDR) and medium density residential (MDR) units, the Alternative would satisfy Objectives #1, #3, and #4 to a lesser extent than the proposed project. Objective #2 related to providing affordable housing would also be met to a lesser extent, because less affordable housing is required for HDR units. The Alternative would not meet Objective #9, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium, and the Alternative would not meet Objective #13, as the neighborhood retail component of the proposed project would not be viable under the Alternative due to the increased number of residential units and the relocation of the park to the center of the site. The significant impacts that would be reduced under this alternative are as follows:

- Conflict with or obstruct implementation of the applicable air quality plan during project operation (remains significant and unavoidable);
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (remains significant and unavoidable);
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation (remains significant and unavoidable);
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (remains significant and unavoidable); and
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis (remains significant and unavoidable).

Though the majority of abovementioned impacts would be reduced under the Higher Number of Units – Same Footprint Alternative, the associated mitigation measures would still be required, and the impacts would remain significant and unavoidable. Overall, the majority of other impacts would remain similar to the proposed project under the Higher Number of Units – Same Footprint

Alternative, including the other identified significant and unavoidable impacts. Significant and unavoidable impacts related to aesthetics, population growth, and WWTP capacity could be greater under the Alternative due to an increase in the amount of multi-family housing along East Covell Boulevard and the number of stories of each multi-family structure and an increased number of residential units.

Environmentally Superior Alternative

An EIR is required to identify the Environmentally Superior Alternative from among the range of reasonable alternatives that are evaluated. Section 15126(e)(2) of the CEQA Guidelines requires that an Environmentally Superior Alternative be designated and states, "If the Environmentally Superior Alternative is the 'no project' Alternative, the EIR shall also identify an Environmentally Superior Alternative among the other alternatives." The No Project (No Build) Alternative would be considered the Environmentally Superior Alternative, because the project site is assumed to remain in its current condition under the Alternative. Consequently, none of the impacts resulting from the proposed project would occur under the Alternative. However, The No Project (No Build) Alternative would not meet the majority of the project objectives.

As discussed in detail in the Alternatives Analysis chapter of this EIR, the Same Number of Units – Smallest Footprint Alternative would generally meet the majority of the project objectives, but to a lesser extent as compared to the proposed project due to the exclusive development of HDR units. The Same Number of Units – Smallest Footprint Alternative would result in fewer impacts than the proposed project related to Transportation; specifically, the significant and unavoidable VMT impact (project-level and cumulative) related to conflicting or being inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) would not occur under the Alternative due to the increased residential density. The Alternative would also result in fewer impacts as compared to the proposed project related to Agricultural Resources, Air Quality, GHG Emissions, and Energy, Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils, Hydrology and Water Quality, and Transportation; similar impacts as the proposed project related to Hazards and Hazardous Materials, Noise, Population and Housing, and Utilities and Service Systems; and greater impacts compared to the proposed project related Aesthetics. It is noted that the significant and unavoidable impacts related to temporary construction noise, visual character, agricultural resources, population growth, transit facilities, transportation hazards, and wastewater treatment plant capacity identified for the proposed project would still occur under the Alternative. Overall, the Same Number of Units – Smallest Footprint Alternative is the only alternative that eliminates the proposed project's significant and unavoidable VMT impacts and associated impacts related to criteria pollutants. Thus, Same Number of Units – Smallest Footprint Alternative is considered the environmentally superior alternative.

2.5 AREAS OF CONTROVERSY

The CEQA Guidelines, Section 15123(b), require that this EIR consider areas of controversy known to the lead agency, including issues raised by agencies and the public. Areas of controversy that were identified in NOP comment letters on the proposed project should be considered, as well. The areas of known controversy for the proposed project relate to the following:

- Inclusion of off-site easements or infrastructure;
- Impacts to scenic quality;
- Conversion of agricultural land uses;
- Increases in air quality and GHG emissions;



- Increases in energy consumption;
- Impacts to aquatic or other sensitive habitats;
- Impacts to special status species;
- Past or future use of hazardous materials on the project site or in the project vicinity;
- Impacts to water quality and drainage;
- Consistency with local and State policies;
- Provision of open space and recreational facilities;
- Traffic increases along surrounding roadways;
- Provision of adequate site access;
- Provision pedestrian and bicycle facilities;
- Effects on emergency evacuation plans;
- Increase in VMT;
- Cumulative traffic impacts of the proposed project and surrounding development; and
- Sufficient water supply.

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.1 Aesthetics			
4.1-1 Have a substantial adverse effect on a scenic vista.	LS	*None required.*	N/A
4.1-2 In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.	S	*None feasible.*	SU
4.1-3 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	S	*4.1-3 In conjunction with submittal of final project improvement plans, the developer shall submit a lighting plan for the review and approval of the Chief Building Official and the Community Development Director of the City of Davis. The lighting plan shall address limiting light trespass and glare on the project site, including any lighting for fields and courts at the proposed community park, through the use of shielding and directional lighting methods, which may include, but is not limited to, fixture location and height. The lighting plan shall comply with Chapter 6 of the Davis Municipal Code- Article VIII: Outdoor Lighting Control.*	LS
4.1-4 Long-term changes in visual character associated with	CC	*None feasible.*	CC, SU

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Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation		Mitigation Measures	Level of Significance After Mitigation
	cumulative development of the proposed project in combination with future buildout of the City of Davis General Plan.				
4.1-5	**Creation of new sources of light or glare associated with development of the proposed project in combination with future buildout of the City of Davis.**	CC	*4.1-5*	*Implement Mitigation Measure 4.1-3.*	LCC
	4.2 Agricultural Resources				
4.2-1	**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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A.**	S	*4.2-1*	*Prior to initiation of grading activities for each phase of development, the project applicant shall set aside in perpetuity, active agricultural acreage in an amount consistent with the applicable agricultural mitigation requirements of the appropriate jurisdiction.* *The agricultural land shall be secured through the purchase of development rights and execution of an irreversible conservation or agricultural easement, consistent with Section 40A.03.025 of the Davis Municipal Code. The location and amount of active agricultural acreage shall be subject to review and approval by the City of Davis Community Development Department. The amount of agricultural acreage set aside shall account for farmland lost due to the conversion of the project site. Pursuant to Davis Municipal Code Section*	SU

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		40A.03.040, the agricultural mitigation land shall be comparable in soil quality with the agricultural land being changed to nonagricultural use. The easement land must conform with the policies and requirements of Yolo Local Agency Formation Commission (LAFCo), including a Land Evaluation and Site Assessment (LESA) score that is a maximum of 10 percent below that of the project site. The easement instrument used to satisfy this measure shall conform to the conservation easement template of the Yolo Habitat Conservancy or to another conservation easement template acceptable to the City of Davis.	
4.2-2 Conflict with existing zoning for agriculture use, or a Williamson Act contract.	LS	*None required.*	N/A
4.2-3 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.	LS	*None required.*	N/A
4.2-4 Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.	CC	*4.2-4 Implement Mitigation Measure 4.2-1.*	CC, SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.3 Air Quality, Greenhouse Gas Emissions, and Energy			
4.3-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction.	LS	*None required.*	N/A
4.3-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation.	S	*4.3-2* *Prior to the issuance of building permits, the project applicant shall ensure that only zero-VOC paints, finishes, adhesives, and cleaning supplies shall be used in the initial construction of all buildings on the project site.* *In addition, verification that only zero-VOC paints, finishes, adhesives, and cleaning supplies are used during operation of the affordable housing components of the proposed project shall be ensured in perpetuity by the project's proposed homeowner's association (HOA).* *For components of the proposed project not subject to an HOA, a zero-VOC paints, finishes, adhesives, and green cleaning products education program shall be made available to all residents and commercial tenants of the proposed project. The program shall include free educational materials such as brochures, pamphlets, checklists, etc., that provide information regarding the proper use of zero-VOC paints, finishes, adhesives, and green cleaning products.* *The aforementioned requirements shall be noted on the project improvement plans and the informational*	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		sheet filed with the final subdivision map(s), and shall be provided to the City of Davis Community Development Department for review and approval prior to approval of improvement plans for each small lot tentative map.	
4.3-3 Expose sensitive receptors to substantial pollutant concentrations.	LS	*None required.*	N/A
4.3-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LS	*None required.*	N/A
4.3-5 Result in the inefficient or wasteful use of energy, or conflict with a State or local plan for renewable energy or energy efficiency.	LS	*None required.*	N/A
4.3-6 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	CC	*4.3-6 Implement Mitigation Measure 4.3-2.*	CC, SU
4.3-7 Generate GHG emissions, either directly or indirectly, that may have a significant impact	CC	*4.3-7(a) Prior to approval of any improvement plans and/or grading plans, the project applicant shall provide proof of compliance with the following to the*	LCC

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Table 2-1
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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction.		*satisfaction of the City of Davis Community Development Department:* *The project applicant shall show on the plans via notation that the contractor shall ensure that all off-road vehicles 25 horsepower or more to be used in the construction of the proposed project, including owned, leased, and subcontractor vehicles, shall be fueled by renewable diesel.* *In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site.* *Portable equipment over 50 horsepower must have either a valid YSAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.* *Proof of conformance with the foregoing requirements shall be submitted by the project contractor to the City of Davis Community Development and Public Works Departments for review and approval.*	

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		4.3-7(b) *Prior to the initiation of construction of the proposed project, the project applicant shall demonstrate that construction-related GHG emissions would be reduced to 1,100 $MTCO_2e$/yr and shall submit proof to the City of Davis Community Development Department.* *Construction-related GHG emissions can be reduced through several options, including, but not limited to, the following:* • *Modify the construction schedule to reduce the intensity of construction to lower emissions;* • *Ensure that phases of development do not overlap;* • *Improve fuel efficiency from construction equipment by:* ○ *Minimizing idling time either by shutting equipment off when not in use or reducing the time of idling to no more than three minutes (five-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site; and*	

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		○ *Using equipment with new technologies (repowered engines, electric drive trains).* • *Perform on-site emission reductions such as implementing on-site material hauling with trucks equipped with on-road engines (if determined to be less emissive than the off-road engines) or real, quantifiable, permanent, verifiable, and enforceable on-site emission reductions;* • *Use alternative fuels for generators at construction sites such as propane or solar, or use electrical power;* • *Use a CARB-approved low carbon fuel for construction equipment; (NO_X emissions from the use of low carbon fuel must be reviewed and increases mitigated.)* • *Encourage and provide carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes;* • *Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones;* • *Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75 percent by weight);* • *Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building*	

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		materials, and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products utilized should be certified through a sustainable forestry program; • *Minimize the amount of concrete for paved surfaces or utilize a low carbon concrete option;* • *Produce concrete on-site if determined to be less emissive than transporting ready mix;* • *Use SmartWay certified trucks for deliveries and equipment transport; and* • *Develop a plan to efficiently use water for adequate dust control.* *The project applicant may elect to implement any combination of the foregoing measures to reduce construction-related GHG emissions. All GHG emissions reductions must be quantified using CalEEMod and provided to the City of Davis Community Development and Public Works Department. Compliance with the aforementioned measures shall be ensured by the City of Davis Community Development and Public Works Department.* *If the quantified reduction measures do not reduce construction-related GHG emissions associated with the proposed project to below 1,100 $MTCO_2e$/yr, offsite carbon credits may be purchased to make up the difference. The purchase of off-site mitigation*	

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		credits shall be negotiated with the City and YSAQMD at the time that credits are sought. Off-site mitigation credits shall be real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). The offsets shall be retired, and emissions must be offset through the end of the proposed project's construction period. Such credits shall be based on CARB-approved protocols that are consistent with the criteria set forth in subdivision (a) of Section 95972 of Title 17 of the California Code of Regulations, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Davis and/or the YSAQMD. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) any registry established by YSAQMD.	
4.3-8 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the	CC	*4.3-8 The project proponent shall prepare and implement a GHG Reduction Plan, to the satisfaction of the City, to demonstrate a downward trajectory in GHG emissions, towards the goal of zero net GHG emissions by the year 2040. Prior to building permit issuance for each phase of the proposed project, the*	CC, SU

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Summary of Impacts and Mitigation Measures

<table>
<tr><th>Impact</th><th>Level of Significance Prior to Mitigation</th><th>Mitigation Measures</th><th>Level of Significance After Mitigation</th></tr>
<tr><td>purpose of reducing the emissions of GHGs during operation.</td><td></td><td>project proponent shall indicate how to complete and implement the following steps:

1. Model operational GHG emissions using CalEEMod, or another method accepted for the purpose of modeling GHG emissions for the proposed project, taking into account applicable building standards and other regulatory requirements, as well as building design, use of renewable energy, etc. The updated modeling shall take into account any updated project design measures incorporated in compliance with this mitigation measure or as proposed in future project design details.

2. Based on the construction and operational schedules proposed at the time of building permitting, the modeled emissions shall be compared to the maximum permitted emissions for the first year of occupancy, based on the applicable Table below:

<table><tr><th colspan="3">Proposed Project</th></tr><tr><th>Year</th><th>Maximum Permitted Net Project Emissions ($MTCO_2e$)</th><th>Emissions Reductions Achieved ($MTCO_2e$)</th></tr><tr><td>2035</td><td>10,607.00</td><td>0.00</td></tr><tr><td>2036</td><td>8,485.60</td><td>2,121.40</td></tr></table></td><td></td></tr>
</table>

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation

2037	6,364.20	4,242.80
2038	4,242.80	6,364.20
2039	2,121.40	8,485.60
2040	0.00	10,607.00
Total Emissions Reductions		*31,821.00*

3. *Should net operational emissions be shown to exceed the maximum emissions levels presented in the applicable table above, the project applicant shall identify feasible actions to achieve sufficient emissions reductions for the year or years being modeled. Reduction measures may include, but are not limited to:*
    - *Use of energy-star appliances in all or part of the project;*
    - *Installation of on-site photovoltaic systems in excess of the City's or State standards in place at the time of this environmental analysis;*
    - *Construct on-site or fund off-site carbon sequestration projects (such as tree plantings or reforestation projects);*
    - *Implement Transportation Demand Management strategies, such as CAPCOA Handbook Strategy T-15, T-16, and T-20-A, in accordance with Mitigation Measure 4.13-4 of this EIR;*
    - *Provide electric vehicle charging infrastructure in excess of existing Tier 1 CBSC requirements; and/or*

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Table 2-1
Summary of Impacts and Mitigation Measures

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		• *Purchase carbon credits to offset project annual emissions. Carbon offset credits shall be verified and registered with The Climate Registry, the Climate Action Reserve, or another source approved by CARB, YSAQMD, or the City of Davis. Off-site mitigation credits shall be real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code Section 38562, subdivisions (d)(1) and (d)(2). The offsets shall be retired, and emissions must be offset through the year 2040. Such credits shall be based on CARB-approved protocols that are consistent with the criteria set forth in subdivision (a) of Section 95972 of Title 17 of the CCR, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Davis and/or the YSAQMD. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) any registry established by YSAQMD. *4. The emissions reductions resulting from implementation of the above measures shall be calculated, using methods acceptable to the City.* *5. Proof of compliance with the maximum annual net emissions targets and the steps above shall be verified through the submittal of a Technical Memorandum of Compliance (TMC) to the City of Davis Department of Community Development. The TMC shall document the following minimum items: modeling (step 1); comparison of modeled emissions to maximum emissions levels identified in Mitigation Measure 4.3-8(a) (step 2); chosen feasible actions to achieve required reductions (step 3); and measurable GHG reduction value of each action (step 4). TMCs prepared in compliance with the foregoing steps may cover individual operational years or multiple operational years. Should a TMC be prepared for multiple operational years, the TMC shall demonstrate compliance with the maximum emissions levels for each year included in the TMC.* *6. Implement the authorized actions and provide evidence of this to the City of Davis Department*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		of Community Development. The City upon review and acceptance of implementation, shall issue the certificate of occupancy.	
4.3-9 Result in a cumulatively considerable inefficient or wasteful consumption of energy or conflict with a State or local plan for renewable energy or energy efficiency.	LS	*None required.*	N/A
4.4 Biological Resources			
4.4-1 Have a substantial adverse effect, either directly or through habitat modifications, on special-status plant species.	LS	*None required.*	N/A
4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee.	S	*4.4-2 The provisions contained herein only apply if Crotch's bumble bee remains a candidate species or is listed under CESA at the commencement of construction. Following CDFW's status report on Crotch's bumble bee, if the California Fish and Game Commission finds that the petitioned action is not warranted, the provisions contained herein shall not be required.* *If feasible, initial ground-disturbing activities associated with the proposed project (e.g., grading, vegetation removal, staging) shall take place between September 1 and March 31 (i.e., outside the colony active period) to avoid potential impacts on special-status bumble bees. If completing all initial ground-disturbing activities between September 1*	LS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		and March 31 is not feasible, then at a maximum of 14 days prior to the commencement of construction activities, a qualified biologist with 10 or more years of experience conducting biological resource surveys within California, and familiar with Crotch's bumble bee life history, shall conduct a preconstruction survey for special-status bumble bees in the area(s) proposed for impact. *The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and zero rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact, and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch's bumble bee include*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Suitable floral resources for western bumble bee include species in the following families: Asteraceae, Fabaceae, Rhamnaceae, and Rosaceae, as well as plants in the genera Eriogonum and Penstemon. At *a minimum, preconstruction survey methods shall include the following:* • *Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present;* • *If special-status bumble bees are observed, watch any special-status bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest;* • *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat;* • *If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of a minimum of four inches to assist with locating the nest;*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• *Look for concentrated special-status bumble bee activity;* • *Listen for the humming of a nest colony; and* • *If bumble bees are observed, attempt to photograph the individual and identify it to species.* *The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could result in take of special-status bumble bees. The report shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department prior to the commencement of construction activities.* *If bumble bees are not located during the preconstruction survey or the bumble bees located are definitively identified as a common species (i.e., not special-status species), then further mitigation or coordination with the CDFW is not required.* *If any sign(s) of a bumble bee nest is observed, and if the species present cannot be established as a*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		common bumble bee, then construction shall not commence until either (1) the bumble bees present are positively identified as common (i.e., not a special-status species), or (2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include, but not be limited to, waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW. *If special-status bees are located, and after coordination with CDFW take of special-status bumble bees cannot be avoided, the project proponent shall obtain an ITP from CDFW, and the project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include, but not be limited to, the project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.*	
4.4-3 Have a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly.	S	*4.4-3*	*The provisions contained herein only apply if monarch butterfly remains proposed for listing under FESA at the commencement of construction.*	LS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Any construction activities within 25 feet of milkweed should occur outside of the summer breeding season (from approximately November 1 through March 15 [USFWS 2021]). If construction activities will occur during the breeding season and directly or indirectly impact milkweed during the summer breeding for Monarch butterflies (approximately March 16 through October 31), pre-construction surveys shall be conducted by a qualified biologist within one week before the onset of construction. If no Monarch butterfly life stage is identified in or immediately adjacent to the Study Area (within 25 feet), no further surveys or actions would be required. *A report summarizing the results of the survey shall be submitted for review and approval to the City of Davis Community Development Department and Public Works Utilities and Operations Department.* *If eggs, caterpillars, or pupae are found, the plants shall be avoided with a 25-foot buffer until metamorphosis is completed and adult butterflies emerge and leave the host plant. Orange construction fencing, flagging, or a similar visible barrier must be used if construction is occurring on-site to demarcate the avoidance area. A biologist shall conduct periodic inspections of the occupied Monarch habitat to determine its life-stage. Monarch butterflies typically take around 30 days to complete their lifecycle from egg to newly hatched adult.*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact		Level of Significance Prior to Mitigation	Mitigation Measures		Level of Significance After Mitigation
4.4-4	**Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle.**	S	*4.4-4*	*Yolo HCP/NCCP AMM14: There are no specific design requirements for western pond turtle habitat, however, project proponents must follow design requirements for the valley foothill riparian and lacustrine and riverine natural communities described in AMMs 9 and 10, which require a 100-foot (minimum) permanent buffer zone from the canopy drip-line (the farthest edge on the ground where water will drip from the tree canopy, based on the outer boundary of the tree canopy). If modeled upland habitat will be impacted, a qualified biologist must be present and will assess the likelihood of western pond turtle nests occurring in the disturbance area (based on sun exposure, soil conditions, and other species habitat requirements). If a qualified biologist determines that there is a moderate to high likelihood of western pond turtle nests within the disturbance area, the qualified biologist will monitor all initial ground disturbing activity for nests that may be unearthed during the disturbance, and will move out of harm's way any turtles or hatchlings found.*	LS
4.4-5	**Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake.**	S	*4.4-5*	*Yolo HCP/NCCP AMM15: The project proponent will avoid effects on areas where planning-level surveys indicate the presence of suitable habitat for giant garter snake. To avoid effects on giant garter snake aquatic habitat, the project proponent will conduct no in-water/in-channel activity and maintain a permanent 200-foot non-disturbance buffer from the outer edge of potentially occupied aquatic habitat. If*	LS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the project proponent cannot avoid effects of construction activities, the project proponent will implement the measures below to minimize effects of construction projects (measures for maintenance activities are described after the following bulleted list). • *Conduct preconstruction clearance surveys using USFWS-approved methods within 24 hours prior to construction activities within identified giant garter snake aquatic and adjacent upland habitat. If construction activities stop for a period of two weeks or more, conduct another preconstruction clearance survey within 24 hours prior to resuming construction activity.* • *Restrict all construction activity involving disturbance of giant garter snake habitat to the snake's active season, May 1 through October 1. During this period, the potential for direct mortality is reduced because snakes are expected to move and avoid danger.* • *In areas where construction is to take place, encourage giant garter snakes to leave the site on their own by dewatering all irrigation ditches, canals, or other aquatic habitat (i.e., removing giant garter snake aquatic habitat) between April 15 and September 30. Dewatered habitat must remain dry, with no*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		water puddles remaining, for at least 15 consecutive days prior to excavating or filling of the habitat. If a site cannot be completely dewatered, netting and salvage of giant garter snake prey items may be necessary to discourage use by snakes. • *Provide environmental awareness training for construction personnel, as approved by the Conservancy. Training may consist of showing a video prepared by a qualified biologist, or an in-person presentation by a qualified biologist. In addition to the video or in-person presentation, training may be supplemented with the distribution of approved brochures and other materials that describe resources protected under the Yolo HCP/NCCP and methods for avoiding effects.* • *A qualified biologist will prepare a giant garter snake relocation plan which must be approved by the Conservancy prior to work in giant garter snake habitat. The qualified biologist will base the relocation plan on criteria provided by CDFW or USFWS, through the Conservancy.* • *If a live giant garter snake is encountered during construction activities, immediately notify the project's biological monitor and USFWS and CDFW. The monitor will stop construction in the vicinity of the snake,*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		monitor the snake, and allow the snake to leave on its own. The monitor will remain in the area for the remainder of the work day to ensure the snake is not harmed or, if it leaves the site, does not return. If the giant garter snake does not leave on its own, the qualified biologist will relocate the snake consistent with the relocation plan described above. • *Employ the following management practices to minimize disturbances to habitat:* ○ *Install temporary fencing to identify and protect adjacent marshes, wetlands, and ditches from encroachment from construction equipment and personnel.* ○ *Maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted practices. No plastic, monofilament, jute, or similar erosion-control matting that could entangle snakes or other wildlife will be permitted.* *Ongoing maintenance covered activities by local water and flood control agencies typically involve removal of vegetation, debris, and sediment from*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		water conveyance canals as well as resloping, rocking, and stabilizing the canals that serve agricultural water users. Maintenance of these conveyance facilities can typically occur only from mid-January through April when conveyance canals and ditches are not in service by the agency, although some drainages are used for storm conveyance during the winter and are wet all year. This timing is during the giant garter snake's inactive period. This is when snakes may be using underground burrows and are most vulnerable to take because they are unable to move out of harm's way. Maintenance activities, therefore, will be limited to the giant garter snake's active season (May 1 to October 1) when possible. All personnel involved in maintenance activities within giant garter snake habitat will first participate in environmental awareness training for giant garter snake, as described above for construction-related activities. To minimize the take of giant garter snake, the local water or flood control agency will limit maintenance of conveyance structures located within modeled giant garter snake habitat (Appendix A, Covered Species Accounts) to clearing one side along at least 80 percent of the linear distance of canals and ditches during each maintenance year (e.g., the left bank of a canal is maintained in the first year and the right bank in the second year). To avoid collapses when resloping canal and ditch banks composed of	

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		heavy clay soils, clearing will be limited to one side of the channel during each maintenance year. *For channel maintenance activities conducted within modeled habitat for giant garter snake, the project proponent will place removed material in existing dredged sites along channels where prior maintenance dredge disposal has occurred. For portions of channels that do not have previously used spoil disposal sites and where surveys have been conducted to confirm that giant garter snakes are not present, removed materials may be placed along channels in areas that are not occupied by giant garter snake and where materials will not re-enter the canal because of stormwater runoff.* *Modifications to this AMM may be made with the approval of the Conservancy, USFWS, and CDFW.*	
4.4-6 Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird.	S	*4.4-6* *<u>Yolo HCP/NCCP AMM21</u>: The project proponent will retain a qualified biologist to identify and quantify (in acres) tricolored blackbird nesting and foraging habitat (as defined in Appendix A, Covered Species Accounts) within 1,300 feet of the footprint of the covered activity. If a 1,300-foot buffer from nesting habitat cannot be maintained, the qualified biologist will check records maintained by the Conservancy (which will include CNDDB data, and data from the tricolored blackbird portal) to determine if tricolored blackbird nesting colonies have been active in or within 1,300 feet of the project footprint during the*	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measures		Level of Significance After Mitigation
			previous five years. If there are no records of nesting tricolored blackbirds on the site, the qualified biologist will conduct visual surveys to determine if an active colony is present, during the period from March 1 to July 30, consistent with protocol described by Kelsey (2008). *Operations and maintenance activities or other temporary activities that do not remove nesting habitat and occur outside the nesting season (March 1 to July 30) do not need to conduct planning or construction surveys or implement any additional avoidance measures.* *If an active tricolored blackbird colony is present or has been present within the last five years within the planning-level survey area, the project proponent will design the project to avoid adverse effects within 1,300 feet of the colony site(s), unless a shorter distance is approved by the Conservancy, USFWS, and CDFW. If a shorter distance is approved, the project proponent will still maintain a 1,300-foot buffer around active nesting colonies during the nesting season but may apply the approved lesser distance outside the nesting season. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*	
4.4-7 Have a substantial adverse effect, either directly or	S	*4.4-7*	*The project applicant shall comply with Yolo HCP/NCCP AMM18. However, should the Yolo*	LS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
through habitat modifications, on burrowing owl.		*HCP/NCCP be modified with respect to burrowing owl coverage in the future given the recent change in the species' status, the project applicant shall comply with the Yolo HCP/NCCP provisions pertaining to burrowing owl as they exist at the time of permit issuance.* *Yolo HCP/NCCP AMM18: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify western burrowing owl habitat (as defined in Appendix A, Covered Species Accounts) within or adjacent to (i.e., within 500 feet of) a covered activity. If habitat for this species is present, additional surveys for the species by a qualified biologist are required, consistent with CDFW guidelines (Appendix L).* *If burrowing owls are identified during the planning-level survey, the project proponent will minimize activities that will affect occupied habitat as follows. Occupied habitat is considered fully avoided if the project footprint does not impinge on a nondisturbance buffer around the suitable burrow. For occupied burrowing owl nest burrows, this nondisturbance buffer could range from 150 to 1,500 feet (Table 4-2, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls [incorporated as Table 4.4-7 of this chapter]), depending on the time of year and the level of disturbance, based on current*	

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		guidelines (California Department of Fish and Game 2012). The Yolo HCP/NCCP generally defines low, medium, and high levels of disturbances of burrowing owls as follows. • *Low: Typically 71-80 dB, generally characterized by the presence of passenger vehicles, small gas-powered engines (e.g., lawn mowers, small chain saws, portable generators), and high-tension power lines. Includes electric hand tools (except circular saws, impact wrenches and similar). Management and enhancement activities would typically fall under this category. Human activity in the immediate vicinity of burrowing owls would also constitute a low level of disturbance, regardless of the noise levels.* • *Moderate: Typically 81-90 dB, and would include medium- and large-sized construction equipment, such as backhoes, front end loaders, large pumps and generators, road graders, dozers, dump trucks, drill rigs, and other moderate to large diesel engines. Also includes power saws, large chainsaws, pneumatic drills and impact wrenches, and large gasoline-powered tools. Construction activities would normally fall under this category.*	

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Summary of Impacts and Mitigation Measures

<table>
<tr><th>Impact</th><th>Level of Significance Prior to Mitigation</th><th>Mitigation Measures</th><th>Level of Significance After Mitigation</th></tr>
<tr><td></td><td></td><td>
<u>High</u>: Typically 91-100 dB, and is generally characterized by impacting devices, jackhammers, compression (“jake”) brakes on large trucks, and trains. This category includes both vibratory and impact pile drivers (smaller steel or wood piles) such as used to install piles and guard rails, and large pneumatic tools such as chipping machines. It may also include large diesel and gasoline engines, especially if in concert with other impacting devices. Felling of large trees (defined as dominant or subdominant trees in mature forests), truck horns, yarding tower whistles, and muffled or underground explosives are also included. Very few covered activities are expected to fall under this category, but some construction activities may result in this level of disturbance.
Table 4.4-5
Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls
<table>
<tr><th rowspan="2">Time of Year</th><th colspan="3">Level of Disturbance (feet) from Occupied Burrows</th></tr>
<tr><th>Low</th><th>Medium</th><th>High</th></tr>
<tr><td>April 1-August 15</td><td>600</td><td>1,500</td><td>1,500</td></tr>
</table>
</td><td></td></tr>
</table>

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August 16-October 15	600	600	1,500
October 16-March 31	150	300	1,500

Source: Yolo Habitat Conservancy. Yolo County Habitat Conservation Plan/Natural Community Conservation Plan [Table 4-2]. April 2018.

The project proponent may qualify for a reduced buffer size, based on existing vegetation, human development, and land use, if agreed upon by CDFW and USFWS (California Department of Fish and Game 2012).

If the project does not fully avoid direct and indirect effects on nesting sites (i.e., if the project cannot adhere to the buffers described above), the project proponent will retain a qualified biologist to conduct preconstruction surveys and document the presence or absence of western burrowing owls that could be affected by the covered activity. Prior to any ground disturbance related to covered activities, the qualified biologist will conduct the preconstruction surveys within three days prior to ground disturbance in areas identified in the planning-level surveys as having suitable burrowing owl burrows, consistent with CDFW preconstruction survey guidelines (Appendix

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		L, Take Avoidance Surveys). The qualified biologist will conduct the preconstruction surveys three days prior to ground disturbance. Time lapses between ground disturbing activities will trigger subsequent surveys prior to ground disturbance. *If the biologist finds the site to be occupied by western burrowing owls during the breeding season (February 1 to August 31), the project proponent will avoid all nest sites, based on the buffer distances described above, during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups that forage on or near the site following fledging). Occupancy of burrowing owl habitat during preconstruction surveys is confirmed at a site when at least one burrowing owl or sign (fresh whitewash, fresh pellets, feathers, or nest ornamentation) is observed at or near a burrow entrance. Construction may occur inside of the disturbance buffer during the breeding season if the nest is not disturbed and the project proponent develops an AMM plan that is approved by the Conservancy, CDFW, and USFWS prior to project construction, based on the following criteria:* • *The Conservancy, CDFW, and USFWS approves the AMM plan provided by the project proponent.*	

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Summary of Impacts and Mitigation Measures

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		• *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).* • *The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.* • *If the qualified biologist identifies a change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to stop all construction related activities within the non-disturbance buffers described above. The qualified biologist will report this information to the Conservancy, CDFW, and USFWS within 24 hours, and the Conservancy will require that these activities immediately cease within the non-disturbance buffer. Construction cannot resume within the buffer until the adults and juveniles from the occupied burrows have moved out of the project site, and the Conservancy, CDFW, and USFWS agree.* • *If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the project proponent may remove the nondisturbance buffer, only with*	

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		concurrence from CDFW and USFWS. If the burrow cannot be avoided by construction activity, the biologist will excavate and collapse the burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation after receiving approval from the wildlife agencies. *If evidence of western burrowing owl is detected outside the breeding season (December 1 to January 31), the project proponent will establish a non-disturbance buffer around occupied burrows, consistent with Table 4-2 (incorporated as Table 4.4-5 of this chapter), as determined by a qualified biologist. Construction activities within the disturbance buffer are allowed if the following criteria are met to prevent owls from abandoning important overwintering sites:* • *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).* • *The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.* • *If there is any change in owl roosting and foraging behavior as a result of construction activities, these activities will cease within the buffer.*	

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• *If the owls are gone for at least one week, the project proponent may request approval from the Conservancy, CDFW, and USFWS for a qualified biologist to excavate and collapse usable burrows to prevent owls from reoccupying the site if the burrow cannot be avoided by construction activities. The qualified biologist will install one-way doors for a 48-hour period prior to collapsing any potentially occupied burrows. After all usable burrows are excavated, the buffer will be removed and construction may continue.* *Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active.* *A qualified biologist will monitor the site, consistent with the requirements described above, to ensure that buffers are enforced and owls are not disturbed. Passive relocation (i.e., exclusion) of owls has been used in the past in the Plan Area to remove and exclude owls from active burrows during the nonbreeding season (Trulio 1995). Exclusion and burrow closure will not be conducted during the breeding season for any occupied burrow. If the Conservancy determines that passive relocation is necessary, the project proponent will develop a burrowing owl exclusion plan in consultation with CDFW biologists. The methods will be designed as*	

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		described in the species monitoring guidelines (California Department of Fish and Game 2012) and consistent with the most up-to-date checklist of passive relocation techniques. This may include the installation of one-way doors in burrow entrances by a qualified biologist during the nonbreeding season. These doors will be in place for 48 hours and monitored twice daily to ensure that the owls have left the burrow, after which time the biologist will collapse the burrow to prevent reoccupation. Burrows will be excavated using hand tools. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure, such as piping, into the burrow to prevent collapsing until the entire burrow can be excavated and it can be determined that no owls are trapped inside the burrow. The Conservancy may allow other methods of passive or active relocation, based on best available science, if approved by the wildlife agencies. Artificial burrows will be constructed prior to exclusion and will be created less than 300 feet from the existing burrows on lands that are protected as part of the reserve system.	
4.4-8 Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk or white-tailed kite.	S	*4.4-8* *Yolo HCP/NCCP AMM16: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*	LS

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees	

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		(documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks. *For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.*	
4.4-9 Have a substantial adverse effect, either directly or through habitat modifications, on northern harrier, other nesting birds, and other raptors protected under the MBTA and CFGC.	S	*4.4-9* *If construction activities take place during the typical bird breeding/nesting season (February 15 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist throughout the project site and all accessible areas within a 500-foot radius of proposed construction areas, at most, 14 days prior to the commencement of construction. If a break in construction activity of more than 14 days occurs, then subsequent surveys shall be conducted. A report summarizing the survey(s) shall be provided to the City of Davis Community Development Department and Public Works Utilities and Operations Department within 30 days of the completed survey and is valid for one construction*	LS

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		season. If nests are not found, further mitigation is not required. *If active raptor nests are found, construction activities shall not take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot non-disturbance buffer shall be established. The non-disturbance buffers may be reduced if a smaller, sufficiently protective buffer is approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, and nest concealment (i.e., whether visual or acoustic barriers occur between the proposed activity and the nest). A qualified biologist may visit the nest, as needed, to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.* *If the nest buffer is reduced but construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest in a way that would be considered a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior. The revised non-disturbance buffer shall remain in place until the chicks have*	

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		fledged or as otherwise determined by a qualified biologist in consultation with the City. *Construction activities may only resume within the non-disturbance buffer after a follow-up survey by the biologist has been conducted and a report has been prepared indicating that the nest (or nests) are not active any longer, and that new nests have not been identified.*	
4.4-10 Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.	S	*4.4-10(a)* *Yolo HCP/NCCP AMM9: The buffers for each sensitive natural community are as follows:* • *Alkali prairie and vernal pools: The area necessary to provide the hydrologic conditions needed to support the wetlands within these natural communities (250 feet). Covered activities will avoid vernal pools or alkali seasonal wetlands by 250 feet, or other distance based on site specific topography to avoid indirect hydrologic effects. A buffer of less than 250 feet around vernal pools or alkali seasonal wetlands will be subject to wildlife agency concurrence that effects will be avoided. Considerations that may warrant a buffer of less than 250 feet may include topography (i.e., if the surrounding microwatershed extends less than 250 feet from the pool or wetland), intervening hydrologic barriers such as roads or canals, or other factors indicating that the proposed*	LS

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		disturbance area does not contribute to the pool's hydrology. Other considerations may include temporary disturbance during the dry season where measures are implemented to avoid disturbance of the underlying claypan or hardpan, and the area is returned to pre-project conditions prior to the following rainy season. • *Valley foothill riparian: One hundred feet from canopy drip-line. If avoidance is infeasible, a lesser buffer or encroachment into the sensitive natural community may be allowed if approved by the Conservancy and the wildlife agencies, based on the criteria listed in AMM1. Transportation or utility crossings may encroach into this sensitive natural community provided effects are minimized and all other applicable AMMs are followed.* • *Lacustrine and riverine: Outside urban planning units, 100 feet from the top of banks. Within urban planning units, 25 feet from the top of the banks.* • *Fresh emergent wetland: Fifty feet from the edge of the natural community.* *4.4-10(b) Prior to the commencement of ground-disturbing activities associated with the off-site pedestrian connections to the Wildhorse Agricultural Buffer, the project proponent shall apply for a Section 1600 Lake*	

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		or Streambed Alteration Agreement (LSAA) from CDFW. The information provided shall include a description of all the activities associated with the proposed project, not just those closely associated with the drainages and/or riparian vegetation. *Impacts for each activity shall be broken down by temporary and permanent impacts, as appropriate, and a description of the proposed mitigation for biological resource impacts shall be outlined per activity and then by temporary and permanent. Information regarding project-specific drainage and hydrology changes resulting from project implementation shall be provided, as well as a description of stormwater treatment methods.* *Minimization and avoidance measures shall be proposed, as appropriate, and may include preconstruction species surveys and reporting, protective fencing around avoided biological resources, worker environmental awareness training, seeding disturbed areas adjacent to open space areas with native seed, and installation of project-specific stormwater best management practices (BMPs).* *Mitigation for impacts to riparian vegetation, if determined necessary by CDFW, may include restoration or enhancement of resources on- or off-site, purchase of off-site habitat credits from an*	

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			agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to CDFW. Mitigation shall result in no net loss of riparian vegetation. Written verification of the Section 1600 LSAA shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.	
4.4-11 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.	S	*4.4-11(a)* *4.4-11(b)*	*Implement Mitigation Measure 4.4-10(a).* *<u>Yolo HCP/NCCP AMM10</u>: Project proponents will comply with stormwater management plans that regulate development as part of compliance with regulations under National Pollutant Discharge Elimination System (NPDES) permit requirements. Covered activities that result in any fill of waters or wetlands will also comply with requirements under Section 404 of the Clean Water Act, State Water Resources Control Board (State Board), Fish and Game Code Section 1602, and Regional Board regulations. Other than requirements for buffers, minimizing project footprint, and species-specific measures for wetland-dependent covered species, this HCP/NCCP does not include specific best management practices for protecting wetlands and waters because they may conflict with measures required by the USACE, State Board, Regional Board, and CDFW.*	LS

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		4.4-11(c) *Prior to the commencement of construction that could result in impacts to potentially regulated aquatic features, the project proponent shall submit an aquatic resources delineation to the U.S. Army Corps of Engineers (USACE) for verification purposes. If USACE takes jurisdiction over the riverine habitat, then the applicant shall apply for a Section 404 permit and Waters that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE. Written verification of the Section 404 permit shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.* *4.4-11(d)* *Prior to the commencement of construction that could result in impacts to potentially regulated aquatic features, the project proponent shall apply for a Section 401 water quality certification/waste discharge requirement from the Regional Water Quality Control Board (RWQCB), and adhere to the certification conditions. Written verification of the Section 401 permit shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.*	
4.4-12 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with	LS	*None required.*	N/A

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established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.			
4.4-13 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands or impacting individual trees.	S	*4.4-13* *Prior to issuance of grading permits, potential impacts to city trees, street trees, and/or trees of significance, as defined by Davis Municipal Code Chapter 37, shall be mitigated in accordance with the City's Tree Ordinance. Final mitigation requirements shall be determined by the City of Davis and may include the following options:* • *Incorporation of existing healthy trees into the design of the project;* • *Replanting of trees on-site;* • *Replanting of trees off-site in City-owned open space or park; and/or* • *Payment to the City's Tree Preservation Fund in lieu of replacement.*	LS
4.4-14 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	S	*4.4-14(a)* *Yolo HCP/NCCP AMM3: Where natural communities and covered species habitat are present, workers will confine land clearing to the minimum area necessary to facilitate construction activities. Workers will restrict movement of heavy equipment to and from the project site to established roadways to minimize natural community and covered species habitat disturbance. The project proponent will clearly identify boundaries of work areas using temporary fencing or equivalent and will identify areas designated as environmentally sensitive. All*	LS

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		construction vehicles, other equipment, and personnel will avoid these designated areas. *4.4-14(b)* *Yolo HCP/NCCP AMM4: To prevent injury and mortality of giant garter snake, western pond turtle, and California tiger salamander, workers will cover open trenches and holes associated with implementation of covered activities that affect habitat for these species or design the trenches and holes with escape ramps that can be used during non-working hours. The construction contractor will inspect open trenches and holes prior to filling and contact a qualified biologist to remove or release any trapped wildlife found in the trenches or holes.* *4.4-14(c)* *Yolo HCP/NCCP AMM5: Workers will minimize the spread of dust from work sites to natural communities or covered species habitats on adjacent lands.* *4.4-14(d)* *Yolo HCP/NCCP AMM6: All construction personnel will participate in a worker environmental training program approved/authorized by the Conservancy and administered by a qualified biologist. The training will provide education regarding sensitive natural communities and covered species and their habitats, the need to avoid adverse effects, state and federal protection, and the legal implications of violating the FESA and NCCPA Permits. A pre-recorded video presentation by a qualified biologist shown to*	

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		construction personnel may fulfill the training requirement. *4.4-14(e)* *Yolo HCP/NCCP AMM7: Workers will direct all lights for nighttime lighting of project construction sites into the project construction area and minimize the lighting of natural habitat areas adjacent to the project construction area.* *4.4-14(f)* *Yolo HCP/NCCP AMM8: Project proponents should locate construction staging and other temporary work areas for covered activities in areas that will ultimately be a part of the permanent project development footprint. If construction staging and other temporary work areas must be located outside of permanent project footprints, they will be located either in areas that do not support habitat for covered species or are easily restored to prior or improved ecological functions (e.g., grassland and agricultural land). Construction staging and other temporary work areas located outside of project footprints will be sited in areas that avoid adverse effects on the following:* • *Serpentine, valley oak woodland, alkali prairie, vernal pool complex, valley foothill riparian, and fresh emergent wetland land cover types.* • *Occupied western burrowing owl burrows. [Occupied for the purpose of AMM8 means at least one burrowing owl has been*	

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		observed occupying the burrow within the last three years. Occupancy of a burrow may also be indicated by owl sign at the burrow entrance, including molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site]. • *Nest sites for covered bird species and all raptors, including noncovered raptors, during the breeding season.* *Project proponents will follow specific AMMs for sensitive natural communities (Section 4.3.3, Sensitive Natural Communities) and covered species (Section 4.3.4, Covered Species) in temporary staging and work areas. For establishment of temporary work areas outside of the project footprint, project proponents will conduct surveys to determine if any of the biological resources listed above are present.* *Within one year following removal of land cover, project proponents will restore temporary work and staging areas to a condition equal to or greater than the covered species habitat function of the affected habitat. Restoration of vegetation in temporary work and staging areas will use clean, native seed mixes approved by the Conservancy that are free of noxious plant species seeds.*	

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		4.4-14(g) *Implement Mitigation Measures 4.4-4, 4.4-5, 4.4-6, 4.4-7, 4.4-8, 4.4-10(a), and 4.4-11(b).*	
4.4-15 Cumulative loss of habitat for special-status species.	S	*4.4-15* *Implement Mitigation Measures 4.4-10(a), 4.4-10(b), 4.4-11(a), 4.4-11(b), 4.4-11(c), and 4.4-11(d).*	LCC
4.5 Cultural and Tribal Cultural Resources			
4.5-1 Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5.	LS	*None required.*	N/A
4.5-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5.	S	*4.5-2* *If archaeological resources are encountered during subsurface excavation activities, the City and Yocha Dehe Wintun Nation (Tribe) shall be notified immediately and all construction activities within a 100-foot radius of the resource shall cease. In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, treatment of all cultural items, including ceremonial items and archaeological items shall reflect the religious beliefs, customs, and practices of the Tribe. All cultural items, including ceremonial items and archaeological items, which may be found at the project site shall be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The project proponent shall waive any and all claims to ownership of tribal ceremonial and cultural items, including archaeological items, which may be found on the project site, in favor of the Tribe. If any*	LS

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		intermediary is necessary (for example, an archaeologist retained by the project proponent), said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe. *If additional significant sites or sites not identified as significant in the project environmental review process, but later determined to be significant, are located within the project impact area, such sites shall be subjected to further archaeological and cultural significance evaluation by the project proponent, the City of Davis, and the Tribe to determine if additional mitigation measures are necessary to treat sites in a culturally appropriate manner, consistent with CEQA requirements for mitigation of impacts to cultural resources. If human remains are present that have been identified as Native American, all ground-disturbing activities shall cease for a period of up to 30 days in accordance with federal Law.* *The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of the foregoing requirements. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of California*	

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		Environmental Quality Act criteria by a qualified cultural resources specialist and Native American Representative from the Tribe. If the resource is determined to be significant under CEQA, the City and Native American Representative from the Tribe shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the Native American Representative from the Tribe shall prepare and implement a research design and archaeological data recovery plan for the resource. The Native American Representative from the Tribe shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials. The tribe shall be afforded the opportunity to review all documents before submission to the appropriate information center.	
4.5-3 Disturb any human remains, including those interred outside of dedicated cemeteries.	S	*4.5-3* *In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, if Native American human remains are found during the course of the proposed project, the determination of Most Likely Descendant ("MLD") under California PRC Section 5097.98 shall be made by the Native American Heritage Commission ("NAHC"), upon notification to the NAHC of the discovery of said remains at the project site. If the location of the site*	LS

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		and the history and prehistory of the area is culturally-affiliated with the Tribe, the NAHC shall contact the Tribe. A tribal member shall be designated by the Tribe to consult with the landowner and/or project proponents. Should the NAHC determine that a member of an Indian tribe other than Yocha Dehe Wintun Nation is the MLD, and the Tribe is in agreement with this determination, the terms of this protocol relating to the treatment of such Native American human remains shall not be applicable; however, that situation is very unlikely. *In the event that Native American human remains are found during development of the proposed project and the Tribe or a member of the Tribe is determined to be MLD pursuant to the above requirements of the Protocol, the following provisions shall apply. The Medical Examiner shall immediately be notified, ground-disturbing activities in that location shall cease, and the Tribe shall be allowed, pursuant to California PRC Section 5097.98(a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods should be treated and disposed of with appropriate dignity.* *The Tribe shall complete its inspection and make its MLD recommendation within 48 hours of getting access to the site. The Tribe shall have the final determination as to the disposition and treatment of human remains and grave goods. Said determination*	

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			may include avoidance of the human remains, reburial on-site, or reburial on tribal or other lands that will not be disturbed in the future. *The Tribe may wish to rebury said human remains and grave goods or ceremonial and cultural items on or near the site of their discovery, in an area which will not be subject to future disturbances over a prolonged period of time. Reburial of human remains shall be accomplished in compliance with the California PRC Sections 5097.98(a) and (b).* *The term "human remains" encompasses more than human bones because the Tribe's traditions call for the burial of associated cultural items with the deceased (funerary objects), and/or the ceremonial burning of Native American human remains, funerary objects, grave goods, and animals. Ashes, soils and other remnants of these burning ceremonies, as well as associated funerary objects and unassociated funerary objects buried with or found near the Native American remains are to be treated in the same manner as bones or bone fragments that remain intact.*	
4.5-4 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074.	S	*4.5-4(a)*	*At least 14 calendar days prior to commencement of ground disturbing activities, the applicant shall arrange for a member of the Yocha Dehe Wintun Nation to conduct Cultural Sensitivity Training with the construction crew. If a member of the Yocha Dehe Wintun Nation Tribe is not available to conduct*	LS

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		a Cultural Sensitivity Training prior to scheduled ground-disturbing activities, then the applicant shall arrange for a qualified archaeologist to conduct Cultural Sensitivity Training to the construction crew. Generally, the training must consist of a presentation to the construction crew about the types of resources and evidence thereof, role of the Tribe or qualified archaeologist(s), what to do if resources are uncovered, etc. To schedule Cultural Sensitivity Training prior to commencement of construction, the applicant shall contact the Cultural Resources Department Administrative Staff, Yocha Dehe Wintun Nation, Office (530) 796-3400, Email: THPO@yochadehe-nsn.gov. Proof of compliance with this measure shall be provided to the City of Davis Community Development Department. *4.5-4(b) A tribal or archaeological monitor shall be present on-site to monitor soil grading, excavation, and trenching activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map, as agreed to by the Tribe.[1] At least 14 calendar days prior to commencement of soil grading, excavation, and trenching activities, the applicant shall extend an invitation for a member of Yocha Dehe Wintun Nation Tribe to monitor soil grading, excavation, and*	

[1] The applicant anticipates that such monitoring map would be developed based on recommendations of the Tribe during AB 52 consultations to identify potentially sensitive areas. Given the extensive ground disturbance at the site from long-term agricultural operations, monitoring is not anticipated to be necessary for the entirety of the site.

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		trenching activities within the project site. If a member of the Yocha Dehe Wintun Nation Tribe is not available to monitor, then the applicant shall arrange for a qualified archaeologist to monitor soil grading, excavation, and trenching activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. The applicant shall prepare a written monitoring plan that shall identify the anticipated ground-disturbing activities scheduled within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. The applicant may revise or update the notification procedures in the written monitoring plan, the role of the tribal or archaeological monitors, timelines for advanced notification to Yocha Dehe Wintun Nation Tribe prior to commencement of activities requiring monitoring, and the procedures to follow in the event tribal cultural resources are uncovered, as established in the mitigation measures. The written monitoring plan shall be approved by the City of Davis Community Development Department staff in advance of ground-disturbing activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. Proof of compliance with this measure shall be provided to the City of Davis Community Development Department. *4.5-4(c) If tribal cultural resources are encountered during subsurface excavation activities, the tribal monitor or applicant's qualified archaeologist shall notify the City*	

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		of Davis, project applicant, and Yocha Dehe Wintun Nation Tribe immediately, and all construction activities within a 100-foot radius of the resource shall cease. The work exclusion buffer may be reduced if the tribal monitor determines the reduced buffer would be adequate to avoid impacts to the resource. In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, treatment of all tribal cultural items (including ceremonial items) shall reflect the religious beliefs, customs, and practices of the Yocha Dehe Wintun Nation Tribe as identified by the tribal monitor. All tribal cultural items, including ceremonial items, which may be found at the project site shall be turned over to the Yocha Dehe Wintun Nation Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The project applicant shall waive any and all claims to ownership of tribal ceremonial and tribal cultural items which may be found on the project site, in favor of the Tribe. If any intermediary is necessary (for example, an archaeologist retained by the project applicant), said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe.	
4.5-5 Cause a cumulative loss of cultural and tribal cultural resources.	LS	*None required.*	N/A

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4.6 Geology and Soils			
4.6-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure.	LS	*None required.*	N/A
4.6-2 Result in substantial soil erosion or the loss of topsoil.	LS	*None required.*	N/A
4.6-3 Be located on a geological 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, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial risks to life or property.	S	*4.6-3 The improvement plan submittal shall include a final geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer for City of Davis Community Development Department and Public Works Department review and approval. The report shall address and make recommendations on the following:* *A. Road, pavement, and parking area design;* *B. Structural foundations, including retaining wall design (if applicable);* *C. Grading practices;* *D. Erosion/winterization; and* *E. Expansive/unstable soils.* *Once approved by the City of Davis Community Development Department and Public Works Department, two copies of the final report shall be provided to the City of Davis Public Works –*	LS

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		Engineering and Transportation Department and one copy to City of Davis Community Development Department – Building Division. It is the responsibility of the developer to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report. *If the geotechnical engineering report indicates the presence of critically expansive or other soil problems that, if not corrected, could lead to structural defects, a certification of completion of the requirements of the soils report shall be required for subdivisions, prior to issuance of Building Permits. This certification may be completed on a lot- by-lot basis or on a Tract basis. This shall be so noted on the improvement plans.*	
4.6-4 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	S	*4.6-4* *Should paleontological resources be discovered during ground-disturbing activities, work shall be halted in the area within 50 feet of the find. Construction may continue in areas outside of the buffer zone. The applicant shall notify the Public Works Department and the City of Davis Community Development Department and retain a qualified paleontologist to inspect the discovery. If deemed significant under criteria established by the Society for Vertebrate Paleontology with respect to authenticity, completeness, preservation, and identification, the resource(s) shall then be salvaged and deposited in an accredited and permanent*	LS

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		scientific institution (e.g., University of California Museum of Paleontology [UCMP] or Sierra College), where the discovery would be properly curated and preserved for the benefit of current and future generations. The language of this mitigation measure shall be included on any future grading plans, utility plans, and improvement plans approved by the City of Davis Public Works – Engineering and Transportation Department and the City of Davis Public Works – Utilities and Operations Department for the proposed project, where excavation work would be required.	
4.6-5 Cumulative increase in the potential for geological related impacts and hazards.	LS	*None required.*	N/A
4.7 Hazards and Hazardous Materials			
4.7-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LS	*None required.*	N/A
4.7-2 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.	S	*4.7-2 Prior to commencement of construction activities, the project applicant shall hire a licensed well contractor to obtain a well abandonment permit from YCEHD for all on-site water supply wells that will not be used, and properly abandon the on-site water supply wells in accordance with Department of Water Resources Bulletin 74-81 (Water Well Standards, Part III). Verification of abandonment shall be submitted for review and approval of the City of Davis Department*	LS

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		of Public Works, Community Development and YCEHD.	
4.7-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LS	*None required.*	N/A
4.7-4 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LS	*None required.*	N/A
4.7-5 Cumulative exposure to potential hazards, and increases in the transport, storage, and use of hazardous materials.	LS	*None required.*	N/A
4.8 Hydrology and Water Quality			
4.8-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction.	S	*4.8-1 Prior to commencement of construction, the applicant shall obtain a NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which pertains to pollution from grading and project construction. Compliance with the Permit requires the project applicant to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to ground disturbance. The SWPPP would incorporate Best Management Practices*	LS

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		(BMPs) in order to prevent, or reduce to the greatest extent feasible, adverse impacts to water quality from erosion and sedimentation. A copy of the SWPPP including BMP implementation provisions shall be submitted to the City of Davis Public Works – Utilities and Operations Department.	
4.8-2 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations.	S	*4.8-2* *Prior to approval of final project improvement plans or grading plans, a final Stormwater Control Plan shall be submitted to City of Davis Public Works – Utilities and Operations Department for review and approval. The final Stormwater Control Plan shall be in compliance with all applicable provisions of the National Pollutant Discharge Elimination System (NPDES) Phase II MS4 General Permit (NPDES General Permit No. CAS612008, Order No. R2-2022-0018) and shall meet the standards of the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and Redevelopment. Site design measures, source-control measures, hydromodification management, and Low Impact Development (LID) standards, as necessary, shall be incorporated into the design and shown on the improvement plans. The final plans shall include calculations demonstrating that the water quality BMPs are appropriately sized, using methodology in the CASQA Stormwater BMP Handbook for New Development and Redevelopment. The final plans shall also incorporate the proposed components for maintaining the stormwater-treatment facilities.*	LS

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4.8-3	**Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.**	LS	*None required.*		N/A
4.8-4	**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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or 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.**	S	*4.8-4*	*As part of the improvement plan submittal process, the Revised Preliminary Stormwater Control Plan prepared for the proposed project shall be submitted to the City of Davis Public Works – Utilities and Operations Department in final format. The final report may require more detail than that provided in the preliminary report, and shall be reviewed in concert with the Improvement Plans to confirm conformity between the two. The report shall be prepared by a Registered Civil Engineer and shall, at a minimum, include: a written text addressing existing conditions, the effects of the proposed improvements, all appropriate calculations, watershed maps, changes in flows and patterns, and proposed on- and off-site improvements and drainage easements to accommodate flows from this project. The report shall identify water quality protection features and methods to be used during*	LS

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		construction, as well as long-term post-construction water quality measures. The final report and associated design-level recommendations provided in the drainage report shall be included in the improvements plans prior to their approval by the City of Davis Public Works – Utilities and Operations Department.	
4.8-5 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 impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.	S	*4.8-5 Prior to improvement plan approval, and if required by the Federal Emergency Management Agency (FEMA), the Yolo County Flood Control and Water Conservation District, or the City Floodplain Administrator, the applicant shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR). A copy of the letter shall be provided to the City of Davis Public Works Engineering and Transportation Department. A Letter of Map Revision (LOMR) from FEMA shall be provided to the City of Davis Public Works Engineering and Transportation Department prior to acceptance of project improvements as complete.*	LS
4.8-6 Cumulative impacts related to the violation of water quality standards or waste discharge requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns.	LCC	*None required.*	N/A

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4.9 Land Use and Planning			
4.9-1 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.	LS	*None required.*	N/A
4.9-2 Cause a significant cumulative 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.	LS	*None required.*	N/A
4.10 Noise			
4.10-1 Generation of a substantial temporary 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.	S	*4.10-1 Prior to the approval of grading and/or building permits, the following requirements shall be noted on improvement plans, subject to review and approval by the City of Davis Community Development Department:* • *The proposed project shall incorporate an eight-foot-tall temporary sound barrier between the existing sensitive receptors to the west and construction activities, as determined by a qualified acoustical consultant prior to commencement of construction (reference locations in Figure 4.10-2 of the Willowgrove EIR).*	SU

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		• *The sound barrier fencing shall consist of 0.5-inch plywood or minimum Sound Transmission Class (STC) 27 sound curtains placed to shield nearby sensitive receptors. The barrier would be placed along the west boundary of large lot parcels S-4, S-5, and 600 feet along the west side of S-9, as measured from the northwest corner of S-9, unless the easterly Palomino Place residences are developed and occupied prior to Willowgrove construction, in which case the barrier shall extend along the entirety of S-9. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance. The noise barrier shall stay in place through the construction of buildings on Large Lot Parcels S-4, S-5, and S-9, after which time they may be removed as buildings on the parcels would provide equivalent shielding;* • *Construction activities shall only take place between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and 8:00 AM and 8:00 PM, on Saturday;* • *All construction equipment powered by internal-combustion engines shall be properly muffled and maintained;* • *Quiet construction equipment, particularly air compressors, are to be selected whenever possible;*	

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		• *All stationary noise-generating construction equipment, such as generators or air compressors, are to be located as far as practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest to the project site;* • *Unnecessary idling of internal-combustion engines is prohibited; and* • *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest to the project site during all project construction.*	
4.10-2 Generation of a substantial 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.	LS	*None required.*	N/A
4.10-3 Generation of excessive groundborne vibration or groundborne noise levels.	LS	*None required.*	N/A

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4.10-4 Generation of a substantial permanent increase in ambient noise levels associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	LS	*None required.*	N/A
4.11 Population and Housing			
4.11-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure).	S	*None feasible.*	SU
4.11-2 Cumulative unplanned population growth.	CC	*None feasible.*	CC, SU
4.12 Public Services and Recreation			
4.12-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance	LS	*None required.*	N/A

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objectives for fire protection services.			
4.12-2 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or 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 services.	LS	*None required.*	N/A
4.12-3 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools and other public facilities.	LS	*None required.*	N/A
4.12-4 Result in substantial adverse physical impacts associated with the provision of new or	LS	*None required.*	N/A

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	physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks; or result in an increase in 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, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.			
4.12-5	**Cumulative impacts to public services.**	LS	*None required.*	N/A
	4.13 Transportation			
4.13-1	**Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.**	S	*4.13-1* *Prior to any construction activities for the project site, the project applicant shall prepare a detailed Construction Traffic Control Plan (CTCP) and submit it for review and approval by the City Department of Public Works Engineering and Transportation. The*	LS

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		applicant and the City shall consult with Yolo County, Caltrans, Unitrans, Yolobus, and local emergency service providers for their input prior to approving the CTCP. The CTCP shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction. A copy of the CTCP shall be submitted to local emergency response agencies and the agencies shall be notified at least 14 days prior to the commencement of construction that would partially or fully obstruct roadways. At a minimum, the CTCP shall include: • *The number of truck trips, time, and day of street closures;* • *Time of day of arrival and departure of trucks;* • *Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting;* • *Provision of a truck circulation pattern that minimizes effects on existing vehicle traffic during peak travel periods and maintains safe bicycle circulation;* • *Resurface and/or repair any damage to roadways that occurs as a result of construction traffic;* • *Provision of driveway access plans so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches,*	

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		and private vehicle pickup and drop-off areas); • *Maintain safe and efficient access routes for emergency vehicles;* • *Manual traffic control when necessary;* • *Proper advance warning and posted signage concerning street closures; and* • *Provisions for pedestrian safety.*	
4.13-2 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities.	S	*4.13-2* *Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall install the following improvements at the project site's two access points along East Covell Boulevard: a green skip-striping bike lane marking at the transition taper (i.e., mixing zone) at the start of each turn pocket; a continuous green bike lane; and a skip-striped bike lane marking through each intersection. The required improvements shall be subject to review and approval by the City Engineer.* *The design shall be similar to the existing bike lane constructed on eastbound East Covell Boulevard at the signalized access at Harper Junior High, which was installed in 2020/2021. The high-visibility improvements shall alert motorists to the potential for a bicyclist to be present and enhance the profile of bicyclists.* *Implementation of the foregoing improvements, or a set of improvements of equal effectiveness as determined by the City Engineer, would reduce the*	LS

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			potential for conflicts involving bicyclists or pedestrians that would otherwise be caused by the proposed project.	
4.13-3 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services.	S	*4.13-3*	*Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall construct dedicated right-turn lanes on westbound East Covell Boulevard at the two project accesses to reduce right-turning traffic currently accommodated by a single travel lane.*	LS
4.13-4 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	S	*4.13-4*	*Prior to occupancy of the first residential unit, unless otherwise noted (e.g., Strategy T-21A) the project applicant shall implement TDM strategies to reduce the number of vehicle trips that would be generated by the residential component of the proposed project, subject to review and approval by the City Engineer. The TDM strategies may include, but not necessarily be limited to, CAPCOA Handbook Strategies T-21A, T-21-B, T-22-A through -C, T-25, and T-46.* *Specifically, the project applicant shall implement the foregoing CAPCOA TDM strategies as follows:* • ***Strategy T-21A**: Upon completion of the Community Park in Phase 2 of the project, the project applicant shall attempt to partner with a carshare service provider and ensure that carshare vehicles are available to project residents in the community park parking lot.*	SU

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Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• ***Strategy T-21-B**: Upon completion of the Community Park in Phase 2 of the project, the project applicant shall attempt to partner with a carshare service provider and ensure that electric carshare vehicles are available to project residents in the community park parking lot.* • ***Strategy T-22-A**: The project applicant shall attempt to provide space for third party company to manage a bikeshare program and maintain bikes for on-demand access to short-term rentals. Such a program could encourage a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions.* • ***Strategy T-22-B**: The project applicant shall attempt to provide space for third party company to manage an electric bikeshare program and maintain electric bikes for on-demand access to short-term rentals. Such a program could encourage a mode shift from vehicles to electric bicycles, displacing VMT and thus reducing GHG emissions.* • ***Strategy T-22-C**: The project applicant shall attempt to provide space for third party company to manage a scootershare program and maintains scooters for on-demand access to short-term rentals. Such a program could encourage a mode shift*	

N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. • ***Strategy T-25****: The project applicant shall coordinate with Unitrans and Yolobus to request a modification in the service for their Routes P and 43, respectively, to include stops at the project site.* • ***Strategy T-46****: The project applicant shall include bus shelters and real-time bus arrival boards at the proposed bus stops if Unitrans and Yolobus are using real-time bus arrival boards and have the technology in place to operate and use real-time bus arrival boards. The bus pullout, shelter pad and any underground conduit shall be constructed at the same time as project frontage improvements, although the shelter itself and any electrical connections can be delayed until such time that a transit service provider agrees to provide bus service at the stop.*	
4.13-5 Result in inadequate emergency access.	LS	*None required.*	N/A
4.13-6 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LS	*None required.*	N/A

N/A = *Not Applicable*; LS = *Less Than Significant*; LCC = *Less Than Cumulatively Considerable*; S = *Significant*; CC = *Cumulatively Considerable*; SU = *Significant and Unavoidable*

Table 2-1
Summary of Impacts and Mitigation Measures

Impact		Level of Significance Prior to Mitigation	Mitigation Measures		Level of Significance After Mitigation
4.13-7	**Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.**	S	*4.13-7*	*Implement Mitigation Measure 4.13-2.*	LS
4.13-8	**Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.**	CC	*4.13-8(a)*	*Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall contribute funding for the completion of a Transit Service and Facilities Plan for the area encompassing the project site and other development along the north side of the Covell Boulevard and Mace Boulevard corridor between the westerly City Limits and the I-80 interchange. The plan shall be led either by Unitrans and Yolobus, or by the City with Unitrans and Yolobus participating as active project partners. The plan shall be guided by the Unitrans and Yolobus service development processes and shall be subject to approval by the City of Davis Public Works (Engineering and Transportation) Department. The Transit Service and Facilities Plan shall identify transit service and facility improvements required in accordance with Unitrans and Yolobus policies related to unmet transit needs, timing for improvements, transit service warrants, and performance standards.*	CC, SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Because applicant funds would be contributing toward plan development, the plan shall explicitly focus on implementing transit service and facilities improvements identified in the aforementioned Transit Service and Facilities Plan that would address project-related contributions to unmet transit needs and project-related deficiencies with respect to transit service warrants and performance standards. The proposed project shall not be responsible for funding improvements that address existing deficiencies. Potential transit improvements include, but are not limited to, the following: *1) Modifying existing transit routes or adding new routes to serve the project site, adding service capacity (through increased headways and/or larger vehicles) to prevent overcrowding and maintain productivity standards.* *2) Constructing transit priority treatments to improve on-time performance (i.e., transit signal priority and/or Intelligent Transportation Systems (ITS) upgrades at East Covell Boulevard traffic signals, transit queue jumps at East Covell Boulevard intersections, etc.).* *3) Improving terminal facilities (i.e., stops) to accommodate additional passengers and transit vehicles.*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		4) Implementing transit pass/fare subsidies for residents and employees. *Improvements shall be selected based on relevant performance data and targeted to address areas not meeting established Unitrans or Yolobus performance standards. Transit facility improvements shall be designed and constructed pursuant to applicable City of Davis, Unitrans, and Yolobus standards.* *To implement this mitigation measure, the proposed project shall establish an appropriate funding mechanism (e.g., Community Facilities District or other mechanism determined acceptable by the City) to fund transit service and facilities improvements and adhere to Unitrans and Yolobus policies related to unmet transit needs, transit service warrants, and performance standards. The funding mechanism shall provide funding for capital costs and ongoing operation of transit services. Ongoing annual fees would be identified and paid by the applicant to fund necessary transit service and facility improvements. Fees would be assessed on all future project land uses that generate an increased demand for transit services, including residential, commercial, civic, and recreation land uses. The project's funding contributions allocated through the funding mechanism shall be limited to improvements and/or portions of improvements that are attributable to the*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		project's contributions to deficient transit service and/or operations. The project shall not contribute funding towards improvements needed to address existing deficiencies and/or improvements needed to address deficiencies attributable to other future land use projects. *Prior to establishing the funding mechanism, the applicant shall submit to the City for review and approval a complete and adequate report supporting the level of assessments/fees necessary for the establishment and continuation of the funding mechanism. The report shall be prepared by a registered engineer, in consultation with a qualified financial consultant. The report shall identify the transit services intended to be funded by the mechanism, the cost to establish and operate these services, the portion of the overall costs to be funded by the applicant, and the assessment/fees to obtain the necessary funding, including a methodology for calculating fee increases over time. A transit service to be explicitly funded by the funding mechanism and included in the report would be the implementation of transit service and facilities improvements necessary to adhere to Unitrans and Yolobus policies related to unmet transit needs, transit service warrants, and performance standards. Project contributions towards ongoing operating costs shall consider other regular established transit funding sources, such as the State of California Local Transportation Fund*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures		Level of Significance After Mitigation
			(LTF) and State Transit Assistance (STA) fund, as well as potential contributions from other future development that would benefit from the transit improvements.	
		4.13-8(b)	*Prior to issuance of any building permits, the project applicant shall pay its fair share toward the installation of a second westbound through lane along the project's East Covell Boulevard frontage, as determined by the City of Davis Department of Public Works Engineering and Transportation.*	
4.13-9 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	CC	*4.13-9*	*Implement Mitigation Measure 4.13-4.*	CC, SU
4.13-10 Result in inadequate emergency access associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	LS	*None required.*		N/A
4.13-11 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm	CC	*4.13-11*	*Prior to occupancy of the first residential unit during Phase 1 of the proposed project, to the satisfaction of the City of Davis, the project applicant shall enter into an agreement to contribute fair share funding, as determined by the City of Davis Public Works*	CC, SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
equipment) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.		*Engineering and Transportation Department, to cover their proportionate cost of the following improvements:* • *Covell Boulevard between Shasta Drive/Risling Court and Birch Lane: Coordinate traffic signals, optimize signal timings, and operate with a 140 second cycle length during the AM peak period and a 150 second cycle length during the PM peak period. Such improvements may require controller or communications upgrades.* • *Mace Boulevard between Alhambra Drive and Cowell Boulevard: Coordinate traffic signals, optimize signal timings, and operate with a 150 second cycle length during the AM and PM peak periods. Such improvements may require controller or communications upgrades.* • *West Covell Boulevard/SR 113 Southbound Ramps: Construct a second westbound left-turn lane and a second receiving lane on the southbound on-ramp.* • *West Covell Boulevard/SR 113 Northbound Ramps: Modify the northbound off-ramp to consist of three lanes approaching West Covell Boulevard, including one left-turn lane, one shared left/through/right lane, and one right-turn lane. Construct a second eastbound left-turn lane.*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• *Mace Boulevard/Second Street/CR 32A: Modify the northbound approach to consist of five lanes, including two left-turn lanes, two through lanes, and a right-turn lane.* • *Mace Boulevard/I-80 Eastbound Slip On-Ramp: Extend the on-ramp and relocate the ramp meter 500 feet east of its current location to provide more ramp meter vehicle storage.* • *Mace Boulevard/Chiles Road: Modify the southbound channelized right-turn lane to a standard signal-controlled movement.* • *Chiles Road/I-80 Eastbound Off-Ramp: Modify the westbound approach to consist of a single through lane. Modify the eastbound approach to consist of two through lanes and begin the second through lane at the Hanlees Davis Toyota driveway.* • *Mace Boulevard between Second Street/CR 32A and Chiles Road: Construct bicycle and pedestrian facility improvements on this segment of Mace Boulevard. Potential improvement options include a Class I shared-use path, Class II bike lanes, or Class IV separated bikeways. Bicycle facility improvements shall reduce the potential for conflicts involving bicyclists at intersections, crossings, and other mixing zones, including (but not limited to) appropriate pavement markings, signage, and physical separation.*	

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Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Pedestrian facility improvement options include modifications to pedestrian crossings of free/channelized vehicular movements to reduce the speed of turning vehicles and to reduce pedestrian exposure to conflicting vehicular traffic.	
4.14 Utilities and Service Systems			
4.14-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	LS	*None required.*	N/A
4.14-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, single dry, and multiple dry years.	LS	*None required.*	N/A
4.14-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected	S	*4.14-3 Prior to issuance of any building permits, the project applicant shall pay the City's Wastewater Capacity Charges in effect at time of issuance.*	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	demand in addition to the provider's existing commitments.			
4.14-4	**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, or conflict with federal, State, and local management and reduction statutes and regulations related to solid waste.**	LS	*None required.*	N/A
4.14-5	**Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City of Davis General Plan.**	CC	*4.14-5 Implement Mitigation Measure 4.14-3.*	CC, SU
	4.15 Wildfire			
4.15-1	**Substantially impair an adopted emergency response plan or emergency evacuation plan.**	LS	*None required.*	N/A
4.15-2	**Due to factors such as on-site fuel sources, slope, and prevailing winds, exacerbate wildfire risks, and thereby expose project occupants to,**	LS	*None required.*	N/A

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Table 2-1
Summary of Impacts and Mitigation Measures

	Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
	pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.			
4.15-3	**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.**	LS	*None required.*	N/A
4.15-4	**Increase in wildfire risk attributable to the proposed project, in combination with cumulative development.**	LS	*None required.*	N/A

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3. Project Description

3. PROJECT DESCRIPTION

3.1 INTRODUCTION AND BACKGROUND

The Project Description chapter of this EIR provides a comprehensive description of the Willowgrove Project (proposed project), in accordance with CEQA Guidelines Section 15124. A detailed description of the project location, project setting and surrounding uses, project objectives, project components, and required project approvals is presented in this chapter. A discussion of the project background is provided below.

Project Site Background

A Pre-Application for the property was submitted to the City in October 2021. In February 2022, City Staff provided comments on the proposal and the Conceptual Land Use Plan. The project applicant and project team held a series of follow-up meetings with City Staff to discuss and clarify items from the initial round of comments. The project applicant made significant revisions to the proposed project based on the comments from City Staff. In October 2022, the project applicant initiated a series of focus group meetings with members of the Davis community to gather feedback on the needs, values, and concerns of the community. The revised project proposal and land use design are a result of the interactions from the meetings. A formal application was submitted to the City in December 2022.

The project site was formerly owned by Shriners, and the proposed project was initially referred to as Shriners Property for historical reference. While the proposed project has been refined in response to initial feedback to increase density and enhance sustainability features, the proposed project remains consistent with the initial project proposal for the Shriners Property Project submitted in December 2022, and the change in name does not reflect a change in the project.

3.2 PROJECT LOCATION

The approximately 232-acre project site, identified by Assessor's Parcel Number (APN) 071-130-007, is located north of the intersection of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis, California (see Figure 3-1 and Figure 3-2). The project site is located outside of the City of Davis City Limits and the City of Davis Sphere of Influence (SOI) and within the unincorporated area of Yolo County. The Yolo County General Plan designates the project site as Agricultural (AG) and the site has a Yolo County zoning designation of Agricultural Intensive (A-N). The project site is situated in Sections 1 and 2 of Township 8 North and Range 2 East, as depicted on the U.S. Geological Survey (USGS) Davis, CA 7.5-minute quadrangle map. The approximate center of the project site is at latitude 38.5695584 and longitude -121.7081286, NAD 83, and is located at an elevation of approximately 33 feet above mean sea level (amsl).

3.3 PROJECT SETTING AND SURROUNDING USES

The following sections provide discussions of the project site's setting and surrounding land uses.

Figure 3-1
Regional Vicinity Map

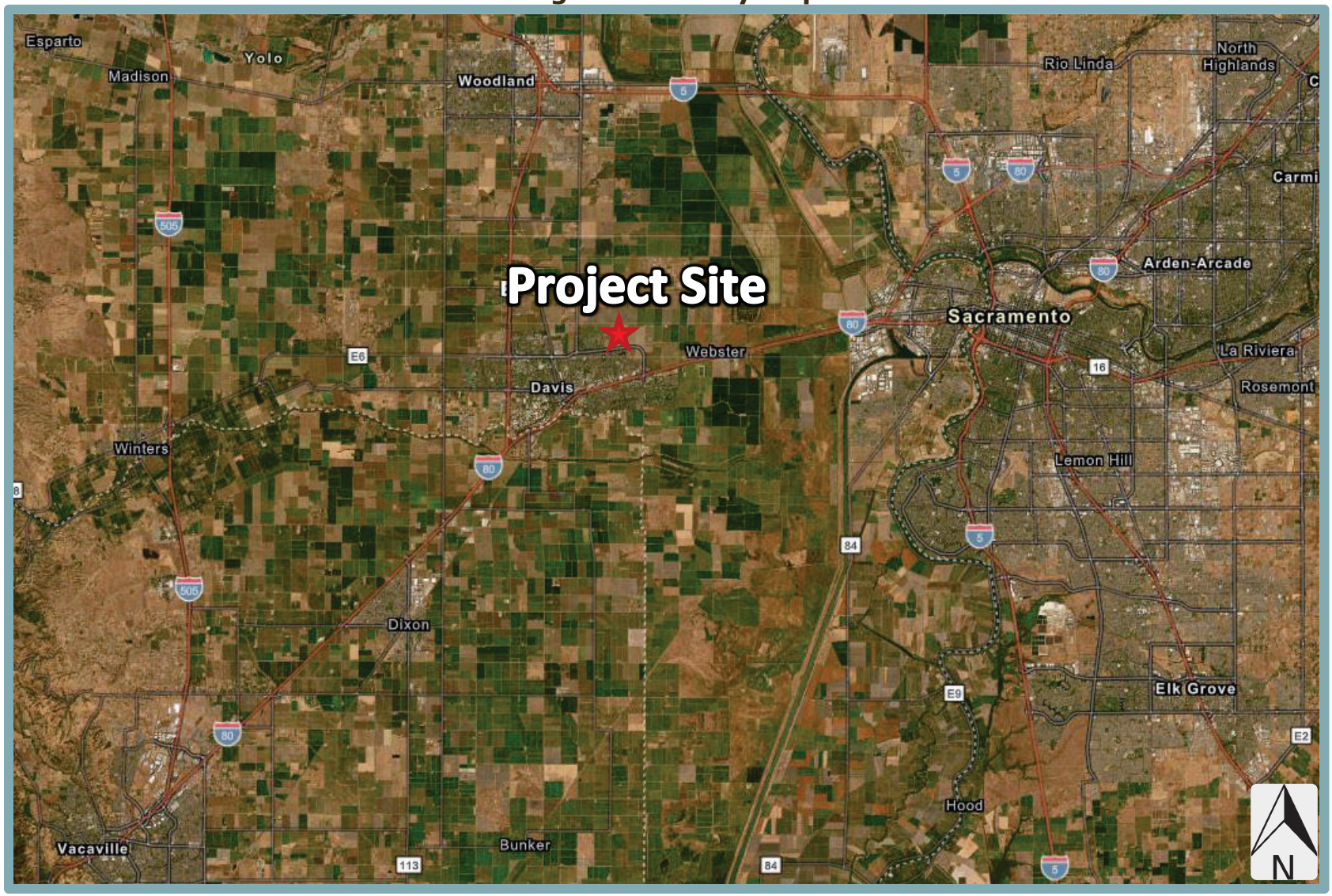


*Figure not OCR compatible.

Figure 3-2
Project Site Boundaries



*Figure not OCR compatible.

Project Site Setting

The project site consists of generally flat land currently used for agricultural activities with approximately 230.6 acres historically and currently planted with row crops. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. Aerial imagery indicates hayfields and crops have been cultivated on the site for at least the past 35 years. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately five to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

In the northwestern portion of the project site, an existing road crossing allows agricultural operations to continue from Channel A to the northern boundary of the project site. A City-owned public trail easement on the Gill Orchard Easement is located northeast of the project site. A public trail is also located to the west of the project site within the Wildhorse Agricultural Buffer. An existing grade-separated crossing that allows bicyclists and pedestrians to cross under East Covell Boulevard is located to the southwest of the project site.

Surrounding Land Uses

The project site is bounded by East Covell Boulevard to the south; the Wildhorse Agricultural Buffer to the west, the majority of which is approximately 200 feet wide; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south, across East Covell Boulevard.

3.4 PROJECT OBJECTIVES

The following objectives have been provided by the project applicant:

1. Provide a meaningful number of housing units for the City, in a balanced and wide variety of densities, products and price points.
2. Provide 20 percent of the total residential units for the construction of deed-restricted affordable housing for low, very low and extremely low-income households.
3. Provide more attainable homeownership opportunities for the “missing middle” households and young families, including 23 percent of the total residential units offering higher density condominiums/townhomes that are anticipated to be more attainable to these households.
4. Prioritize the use of high and medium density housing for the missing middle and young families who are currently unable to find or afford housing in Davis.
5. Create the type of housing that will encourage young families to buy and live in Davis, increasing the number of children attending Davis Joint Unified School District (DJUSD) schools.
6. Encourage people living outside and commuting in to Davis to live in Davis, thereby reducing regional vehicle miles traveled (VMT) and associated environmental impacts.
7. Respect existing agricultural uses by providing buffers that create a transitional space and encourage residents to appreciate the value of both uses coexisting together while establishing a thoughtfully designed urban City boundary.

8. Develop an inclusive community for all, including those with intellectual or developmental disabilities with independent housing, recreation, and employment opportunities designed to meet the unique needs of that cohort.
9. Provide a vibrant community park with active ballfields, inclusive play areas, and an indoor gymnasium, proximate to existing residents as well as new homeowners.
10. Provide a transit station and stops, allowing easy access to transit for neighborhood residents and visitors and reducing the use of individual automobiles.
11. Create outdoor educational opportunities for various age groups and abilities, which encourage exploration and complement existing programs within the City.
12. Expand the City's existing bikeway and pedestrian trail system and provide important connections to new off-site bikeways and existing public trails.
13. Support existing retailers by avoiding the construction of brick-and-mortar retail and instead providing an eclectic neighborhood retail and entertainment area with opportunities to incorporate a Competitive Integrated Employment (CIE) program for persons living with intellectual or developmental disabilities.
14. Design an environmentally sensitive and sustainable community that features an urban forest throughout the connected trail system and emphasizes the use of rooftop solar electricity to reduce the community's environmental footprint, reduce automobile and water use, and increase tree cover.
15. Create an economically feasible project able to construct the special amenities and features proposed for the neighborhood.

3.5 PROJECT COMPONENTS

In general, the proposed project would consist of a mixed-use community, including a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences across various residential neighborhoods (see Figure 3-3). In addition, the proposed project would include transit improvements; neighborhood retail uses; a daycare facility; associated on-site roadway improvements; utility improvements; recreational uses, such as a community park, mini park, and a gym, open space, and greenbelts; and off-site improvements.

The proposed project would require discretionary approvals, including an Amendment of the City's SOI, Annexation of the 232-acre project site into the City of Davis, a General Plan Amendment, Pre-zoning of the project site to City of Davis zoning designations, Final Planned Development for site development standards, Large Lot and Small Lot Vesting Tentative Maps, and a Development Agreement. The project components are discussed further below.

Sphere of Influence Amendment and Annexation

The project site is currently located in an unincorporated portion of Yolo County and is located outside of the City's SOI. Thus, the proposed project includes a request to amend the Davis SOI to adjust the City's SOI boundary lines and annex the 232-acre project site into the City of Davis (see Figure 3-4). The SOI Amendment and Annexation are ultimately subject to approval by the Yolo Local Agency Formation Commission (LAFCo), which would serve as a responsible agency. The City of Davis would be responsible for approving a resolution authorizing the project applicant to submit an SOI Amendment and Annexation application to Yolo LAFCo.

Figure 3-3
Illustrative Site Plan



*Figure not OCR compatible.

Figure 3-4
Sphere of Influence Amendment and Annexation

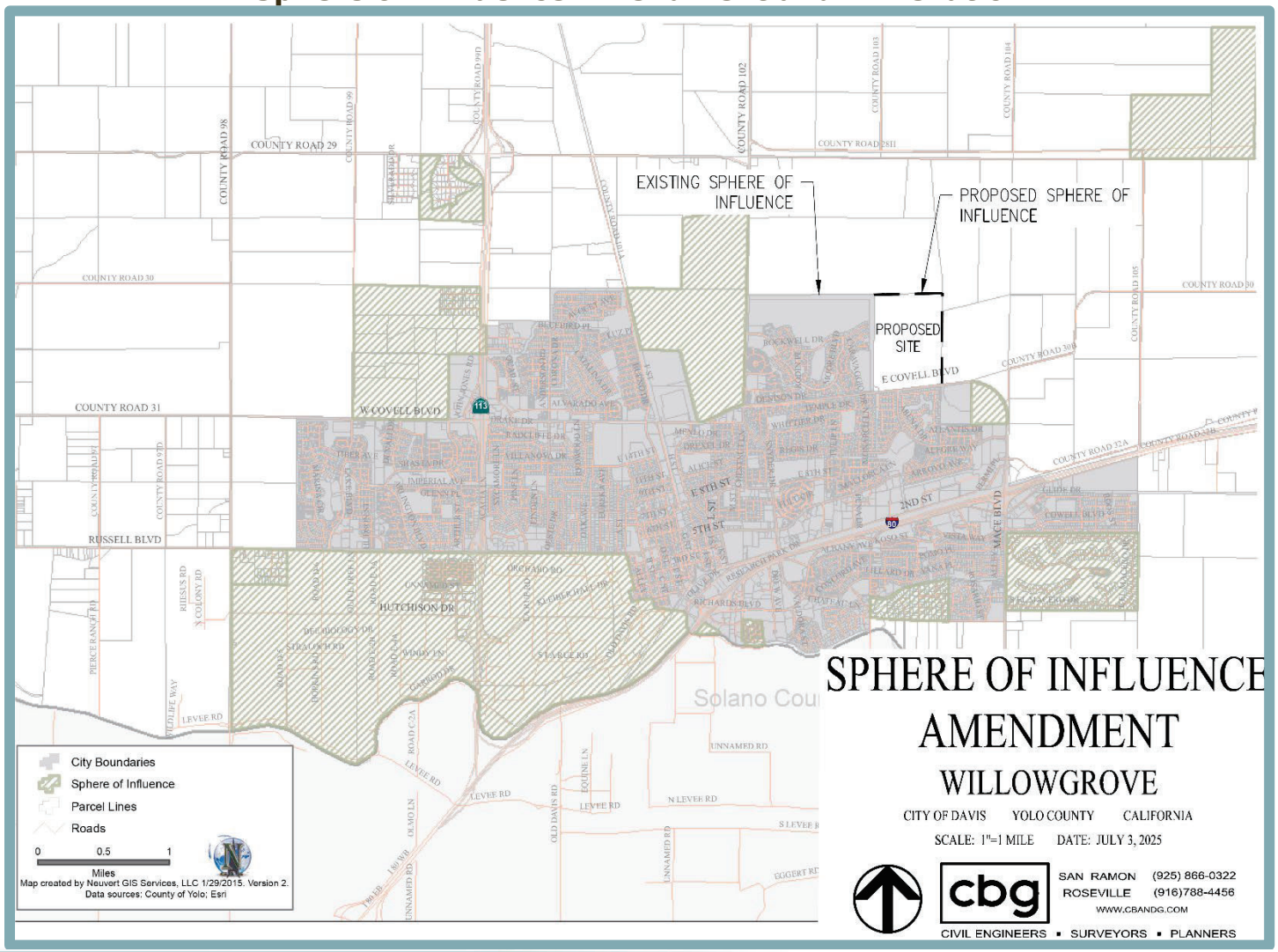


*Figure not OCR compatible.

General Plan Amendment

The project site is designated by Yolo County as AG. The proposed General Plan Amendment would redesignate the project site with City of Davis land use designations Residential Low Density (LDR), Residential Medium Density (MDR), Residential High Density (HDR), Urban Agricultural Transition Area (UATA), Park, Neighborhood Greenbelt, and Neighborhood Retail, consistent with the uses proposed as part of the project, as discussed further below and illustrated in Figure 3-5.

The General Plan Amendment would also amend Table 3 and Map 4 of the Transportation Element to allow 4+ lanes after 2015 for the Alhambra Drive to Alhambra Drive segment of the East Covell Boulevard/Mace Boulevard roadway. The widening of East Covell Boulevard is not required for the proposed project, but would be necessary under cumulative conditions for the proposed project and other reasonably foreseeable development. City Staff have thus included the General Plan Amendment with the project approvals to prepare for cumulative conditions. The General Plan may be amended prior to approval of the proposed project, in which case the amendments to address the widening of East Covell Boulevard under cumulative conditions would not be included with the project approvals. The General Plan Amendment would add the new footnote 9 to City of Davis Transportation Element Table 3 and revise Map 4 of the Transportation Element to reflect four lanes (see Appendix C of this EIR).

Pre-Zoning

Corresponding with the project site's current Yolo County land use designation, the site is zoned by Yolo County as A-N. Following annexation into the City Limits, the project site would be pre-zoned to the City's Planned Development (P-D) zone with more specific subareas (see Figure 3-6). The P-D zoning designation is intended to allow for greater flexibility from the development standards established for the City's conventional zoning districts. As part of approval of the Pre-zoning to P-D, the proposed project would be required to adhere to the development standards set forth by the P-D, which would also be subject to City approval.

Davis Municipal Code Section 40.22.060 anticipates a preliminary approval of a P-D and Section 40.22.090 anticipates a final application and approval. With the inclusion of the Vesting Tentative Map and Pre-Zoning, the project seeks approval of the Final P-D under Section 40.22.090. According to Davis Municipal Code Section 40.22.090, approval of a Final P-D for the proposed project must contain data and information enumerated therein, such as land uses proposed for the P-D zone, location of parks and trails, proposed street layout, development standards, and a proposed tentative subdivision map. The components of the P-D for the proposed project are discussed further below.

Vesting Tentative Maps

The proposed project would include a Large Lot Tentative Map to subdivide the 232-acre project site into 27 parcels to allow for phased development (see Figure 3-7). The proposed project would also include a Vesting Tentative Map to subdivide the project site and develop up to 1,250 new residential units, comprised of 197 low-density single-family detached units, 515 medium-density single-family units/duplexes/townhomes, and 538 high-density affordable and market rate apartments/townhomes/condominiums (see Figure 3-8).

Figure 3-5
General Plan Amendment



*Figure not OCR compatible.

Figure 3-6
Proposed Zoning

Sub Area	PD Designation	Gross Acres*
E, F, G, H	Residential Low Density	44.8
I, J, K, L, M, N, O, P	Residential Medium Density	65.9
S, T, U	Residential High Density	23.8
B, W, X	Park/ Recreation	19.2
Y	Neighborhood Retail	1.5
C, D, Q, R, V	Neighborhood Greenbelt	8.7
A	Urban Agriculture Transition Area	44.3
Z	Major Streets	24.2
	Total	232.4

* Note: PD acreages are gross and include internal streets, which should be removed for the purposes of residential area and density calculations.



*Figure not OCR compatible.

Figure 3-7
Large Lot Tentative Map

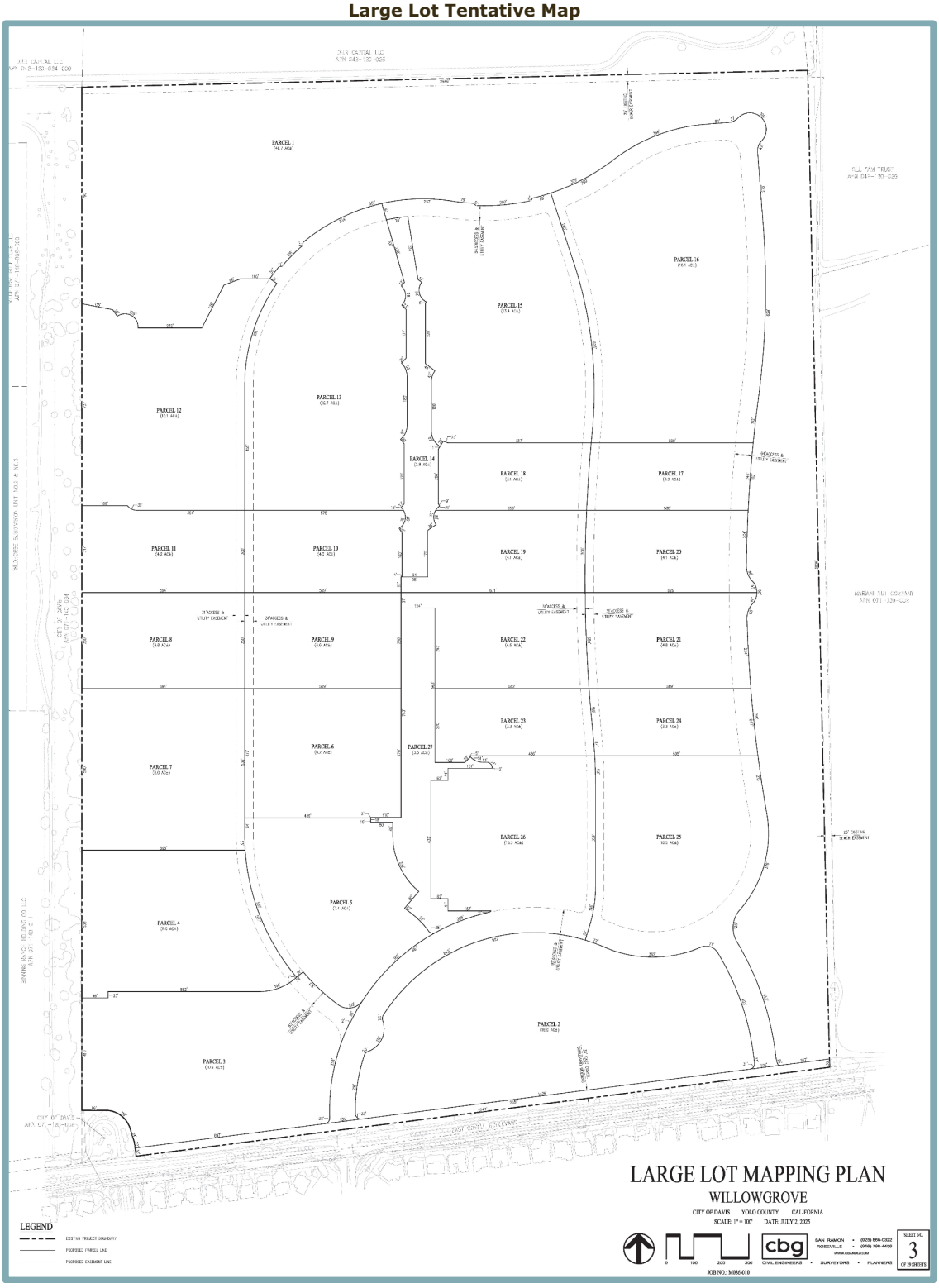


*Figure not OCR compatible.

Figure 3-8
Vesting Tentative Map



*Figure not OCR compatible.

In addition, subdivision of the project site would include 19.2 acres of park uses, 8.7 acres of greenbelt uses, 44.3 acres of UATA, and 1.5 acres of neighborhood retail uses. The foregoing components of the Vesting Tentative Map are discussed further below.

Residential Neighborhoods

As previously noted, the proposed project would consist of a residential community, including a total of 1,250 dwelling units. The residential units would be developed across the project site and would consist of LDR, MDR, and HDR neighborhoods, as summarized in Table 3-1. The overall net residential density would be approximately 11.9 dwelling units per acre (du/ac).

Table 3-1
Land Use Summary

Proposed Land Use Designation	Net Acres	Units
Residential Low Density	37.2	197
Residential Medium Density	52.6	515
Residential High Density	14.9	538
Subtotal	**104.7**	**1,250**
UATA (Trails, Habitat, Detention Basins)	44.3	--
Park (Community Park, Mini-Park, Dog Park)	19.2	--
Neighborhood Greenbelt	8.7	--
Neighborhood Retail	1.5	--
Subtotal	**73.7**	**--**
Street, Private Drives, Landscape Corridor	54.0	--
Total	**232.4**	**1,250**

Residential Low Density

The proposed project would include four LDR large lot parcels located in the northern portion of the project site, with a total of 197 dwelling units (16 percent of the overall total units). The LDR land use designation supports a range of single-family detached homes. The General Plan allows for a density of 2.88 to 5.75 du/ac in the LDR designation, where a variety of larger, detached single-family housing types are permitted. The proposed project would include a density of approximately 5.3 du/ac in the LDR parcels.

Residential Medium Density

The proposed project would include 16 MDR large lot parcels located in the central portion of the project site, with a total of 515 dwelling units (41 percent of the overall total units). The MDR land use designation supports single-family detached and attached residential units, such as single-family homes, duplexes, and townhomes. The General Plan allows for a density of 5.76 to 13.44 du/ac in the MDR designation. The proposed project would include a density of approximately 10.2 du/ac in the MDR parcels.

Residential High Density

The proposed project would include three HDR large lot parcels located in the southern portion of the project site, including 538 dwelling units (43 percent of the overall total units). The HDR land use designation primarily accommodates attached residential units, such as apartments, townhomes, and condominiums. The General Plan allows for a density of 24 to 48 du/ac in the HDR designation. The proposed project would include a density of approximately 36.1 du/ac in the HDR parcels.

The proposed HDR units would include both market-rate and affordable multi-family units. Affordable HDR units would be rental units, while market-rate HDR units may be for sale or rental units. All of the HDR land uses would be located on the southern portion of the site, placing the highest density housing near the proposed community park, neighborhood retail, transit stops, and other neighborhood amenities. The two affordable housing parcels would be located in the southwest corner of the project site, providing pedestrian and bicycle access to the existing grade-separated crossing of East Covell Boulevard, and the proposed transit station and transit stop, daycare facility, community park complex, small neighborhood retail, and pedestrian connections to the Wildhorse trail system.

Deed-Restricted Affordable Housing Plan

The project applicant has partnered with Mutual Housing of Sacramento for the development of 250 deed-restricted affordable units for low, very-low, and extremely low income households. The 250 affordable units would constitute 20 percent of the project's total units.

As proposed, the applicant would grant Mutual Housing of Sacramento a construction-ready site at no cost on which to build affordable units, as well as a monetary contribution. Mutual Housing of Sacramento would also work with Alta Regional on a program to ensure that some of the rental units would be made available to individuals with intellectual and developmental disabilities. The site would be made available to Mutual Housing at the outset of the project site development, allowing Mutual Housing to pursue financing for construction of the affordable units.

"Missing Middle" Attainable Housing

The proposed project would include an additional 288 units, or 23 percent of the total unit count, that would be designed to attract "missing middle" households, including young families. The units would not be subject to any affordability restrictions, but the higher density and condominium/townhome product would make it more likely that these units would remain relatively lower-cost and attainable to other households.

Daycare Facility

A daycare facility is also proposed within the HDR parcel, centrally located between the two affordable housing areas. The daycare would include an approximately 6,300 square foot (sf) building and 2,700 sf outdoor play area.

Access and Circulation

Primary site access would be provided from East Covell Boulevard (see Figure 3-9). From East Covell Boulevard, Alhambra Drive would be extended into the site from the existing intersection in a north-to-south direction. In addition, a new intersection would be constructed from East Covell Boulevard in the southeastern portion of the project site. Both entry streets would extend into the project site around the proposed community park, and would include traffic circles at the first internal intersections connecting to the modified local street and collector street.

The entry streets would include 16-foot wide landscaped medians, 12-foot wide travel lanes, and buffered seven-foot wide bike lanes (see Figure 3-10). Additionally, six-foot wide sidewalks would be separated by eight-foot wide landscape corridors. On-street parking would not be allowed along the entry streets.

Figure 3-9
Vehicle Circulation Plan



*Figure not OCR compatible.

Figure 3-10
Street Sections

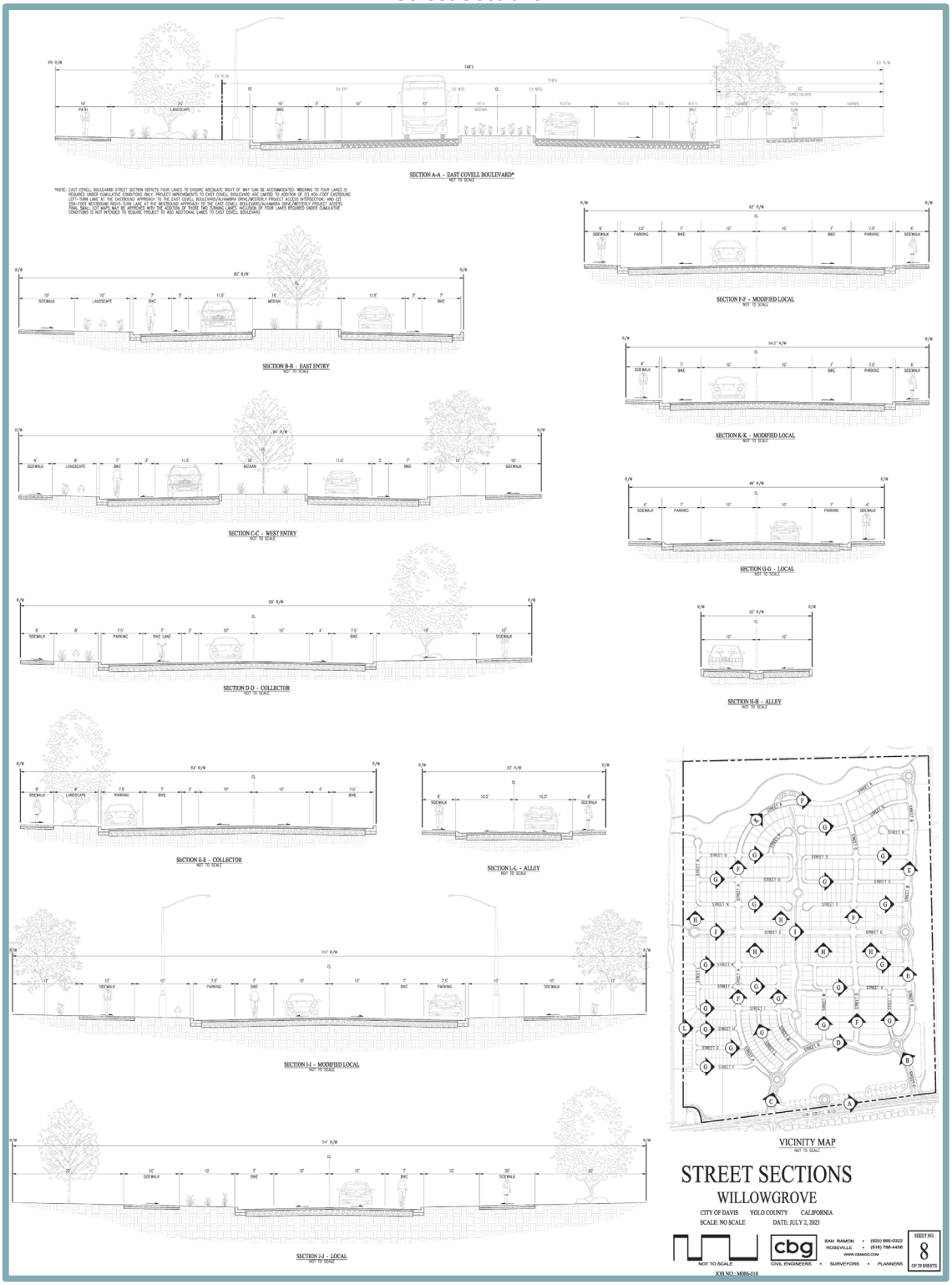


*Figure not OCR compatible.

From the traffic circle at the eastern entry street, a collector street would extend northward along the eastern portion of the project site, and would connect to a traffic circle on the southern side of Channel A.

The collector street would include 10-foot wide travel lanes, buffered minimum seven-foot wide bike lanes, and two traffic circles. On-street residential parking would be provided on the western side of the collector street, and a six-foot wide sidewalk would be located on the western side of the street, separated by an eight-foot wide landscape corridor.

Modified local streets would extend into the project site from the collector and entry streets. The primary east-west street in the center of the project site would include an enhanced landscape setback. The modified local streets would include 10-foot wide travel lanes, seven-foot wide bike lanes, and eight-foot wide parking lanes. Attached six-foot wide sidewalks would be located along the modified local streets with separated 10-foot wide multi-use pathways located along the Central Green Street that runs east-west.

The internal street system would consist of local streets and private drives. The internal neighborhood street design would primarily be oriented east-west. Local streets and private drives would include 10-foot wide travel lanes. Local streets would include attached six-foot wide sidewalks and seven-foot wide on-street parking lanes.

The proposed project would include a multimodal network of bikeways, sidewalks, and transit stops (see Figure 3-11). With respect to pedestrian access, as previously discussed, the internal street network would include six-foot-wide sidewalks along all internal streets. Ten-foot-wide shared-use pedestrian paths would be located along the entry streets and modified local streets, and a pedestrian path would be located within the proposed UATA.

A new pedestrian bridge, which would accommodate maintenance vehicles, over Channel A would be located within the UATA. A 14-foot-wide shared use path would be oriented north-south in the central portion of the project site, within the proposed North Central Greenbelt. An existing culvert in Channel A is located in the northwestern portion of the project site and serves as the current crossing for the existing agricultural operations. The existing vehicle crossing would be no longer needed with the new bridge and vehicle access is not proposed, but the existing culvert would remain. The existing culvert crossing would remain for pedestrian use and provide additional trail connectivity. The proposed sidewalks and shared-use paths would connect to existing off-site City of Davis trails located to the north (i.e., Gill Property trail), west (i.e., Wildhorse Agricultural Buffer), and south (i.e., existing undercrossing at East Covell Boulevard) of the project site. The proposed project would include over three miles of shared-use trails, adding to the City's bikeway and greenbelt systems.

With respect to transit, the proposed project would include installation of two new transit connections located along the frontage of the project site along East Covell Boulevard, with a new transit station located within the proposed community park and a new transit stop located in the southwestern corner of the project site, closest to the affordable site. The transit station would include a self-service bicycle repair station, bicycle parking, and expanded shaded seating and would provide access to the neighborhood retail and community park amenities. The transit center would also include wayfinding information about trail connectivity and alternative transportation routes to and from the project site. Shaded seating would also be provided at the transit stop.

Figure 3-11
Pedestrian Circulation

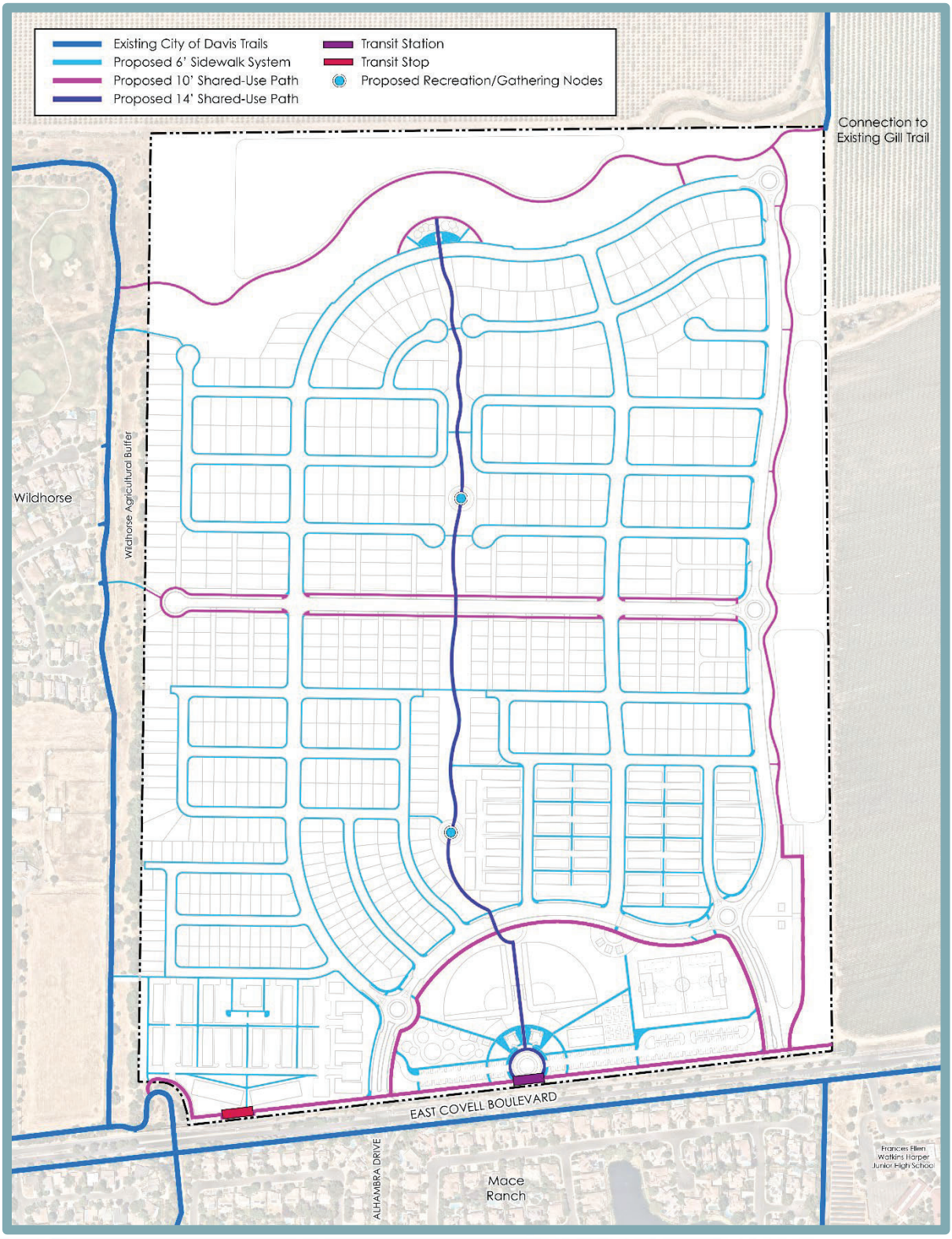


*Figure not OCR compatible.

Emergency Vehicle Access and Fire Station

The proposed project would include an Emergency Vehicle Access (EVA) in compliance with the Fire Code's Remoteness criteria. The EVA would provide an additional vehicular connection to East Covell Boulevard for emergency vehicles at the southwest corner of the project site between the proposed transit stop and the existing pedestrian undercrossing (see Figure 3-12).

In addition, the Davis Fire Department has identified the potential need for an approximately two-acre fire station to improve emergency response times for underserved homes in the northern portion of the City. If the new station is not accommodated elsewhere, the proposed project has reserved land to accommodate the facility on the southwestern HDR parcel, adjacent to East Covell Boulevard. The new fire station would ultimately be designed and implemented by the Davis Fire Department, but could consist of a four-bay fire station and a small space to support police personnel. If constructed on-site, the new fire station would have a dedicated entry and exit onto East Covell Boulevard.

Traffic Calming Plan

A number of traffic calming measures would be incorporated into the proposed vehicular circulation system design to encourage lower speeds and ensure safe pedestrian and bicycle travel within the community. Traffic calming measures would include traffic circles, speed humps, raised crosswalks, raised intersections, and corner extensions or bulb-outs (see Figure 3-13).

Traffic circles would be included along the internal collector street as a traffic calming measure to change the operating character of the roadway as it transitions from higher-speed operation to a lower-speed operation with more pedestrian amenities. Speed humps, typically three inches in height and 12 feet in length along the vehicle travel path axis, would be provided to discourage speeding. Raised crosswalks would be provided to improve pedestrian safety by causing motorist speed to decrease at the crossing. A raised crosswalk is typically between three and six inches above street level and improves the line of sight for pedestrians toward an oncoming vehicle. Raised intersections would be included to slow vehicle traffic through the intersection and improve pedestrian safety. Three rectangular rapid flashing beacon (RRFB) crossings with raised crosswalks would be provided along the shared-use path in the center of the project site. Lastly, corner extensions would include a horizontal extension of the sidewalk into the street, resulting in a narrower roadway section which would slow automobile turning speeds, shorten pedestrian crossing distance, and increase pedestrian visibility.

Utilities

The proposed project would include utility improvements related to water, sanitary sewer, and storm drainage services, which are generally discussed below.

Water

Water service would be provided by the City of Davis through new connections to the existing water system. In the immediate project vicinity, East Covell Boulevard contains an existing 12-inch line (see Figure 3-14). From the existing water line in East Covell Boulevard, new eight- and 12-inch water lines would be installed and extended into the project site within the new on-site internal streets. From the new water lines, water service would be provided to each structure through new water laterals. All new water infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

Figure 3-12
Emergency Vehicle Access



*Figure not OCR compatible.

Figure 3-13
Traffic Calming Plan



*Figure not OCR compatible.

Figure 3-14
Proposed Water Infrastructure

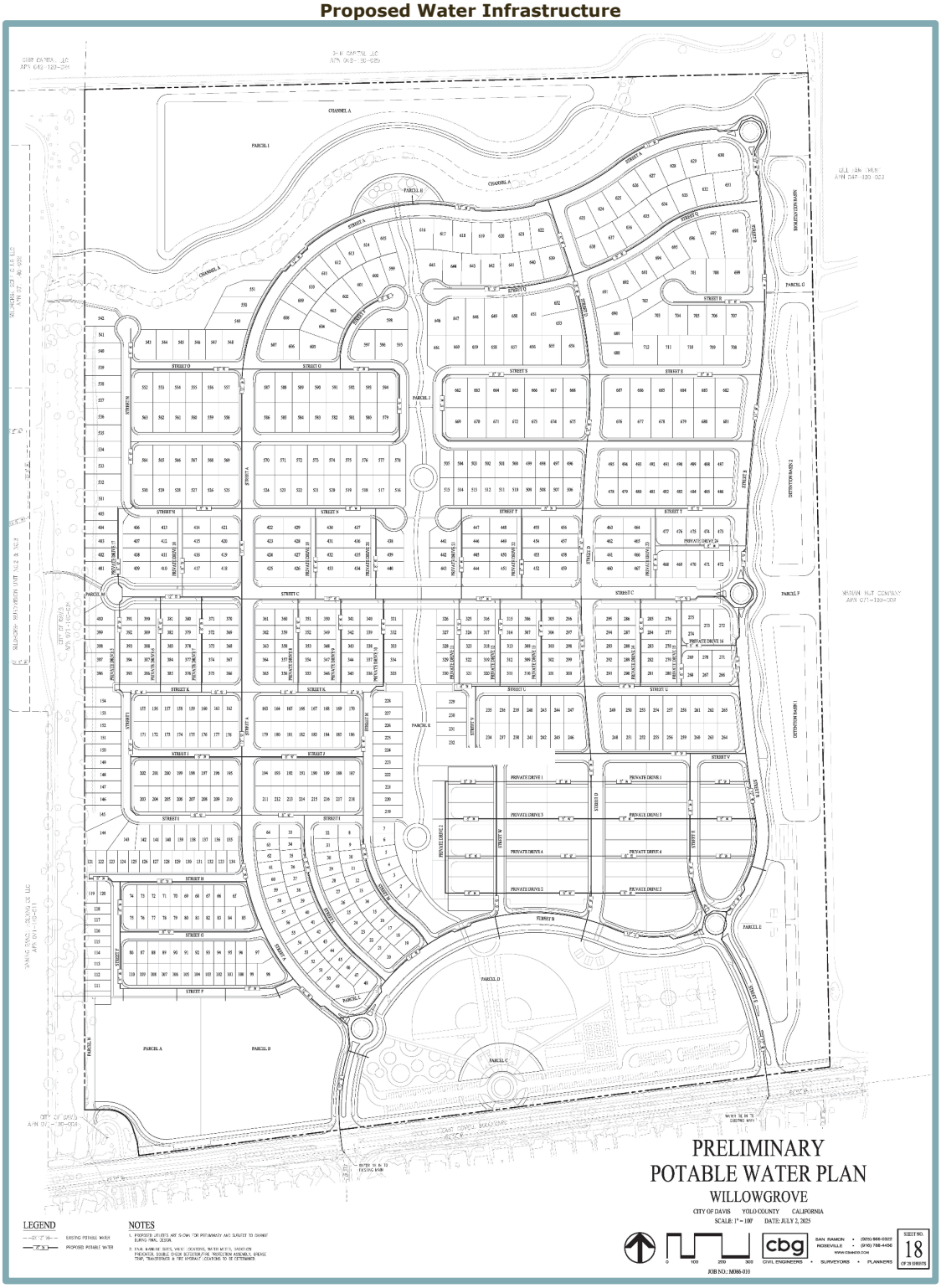


*Figure not OCR compatible.

Sewer

Sanitary sewer service would be provided by the City of Davis through new connections to the existing sewer system. As shown in Figure 3-15, existing 24- and 42-inch sewer mains traverse along the northern and eastern site boundaries.

New eight- and 12-inch sewer lines would be installed and extended from the existing sewer mains into the project site from the eastern boundary within the new on-site internal streets. From the new sewer lines, sewer conveyance services would be provided to each structure through new sewer laterals. All new sewer infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

Storm Drainage

Storm drainage service would be provided by the City of Davis through new connections to the existing system and a series of new on-site stormwater basins. The project site slopes gently from west to east. Storm drainage from the site would follow the existing drainage pattern and be collected in one of three basins along the eastern project site boundary.

The basins would serve to both detain and mitigate peak drainage flows as well as provide water quality treatment. Ultimately, treated storm runoff from the site would be discharged in Channel A. The existing culvert in Channel A, which is located in the northwestern portion of the project site, would remain. New storm drainage infrastructure installed as part of the proposed project would be designed in accordance with the stormwater quality control standards established by Davis Municipal Code Article 30.03.

Dry Utilities

Electricity service would be provided to the project site by Pacific Gas & Electric Company (PG&E) and Valley Clean Energy (VCE) through connections to existing infrastructure in the project vicinity along East Covell Boulevard. The proposed project would not use natural gas. Telecommunication services, such as telephone and internet services, would be provided by Xfinity and/or other providers through connection to existing infrastructure.

Urban Agricultural Transition Area, Greenbelts, and Parks

The proposed project would include a total of approximately 72.2 acres of parks, greenbelts, and a UATA, including the Community Park and Mini Park. To ensure long term financial sustainability for amenities and landscaping, a Services Community Facilities District (CFD) would be formed for the proposed project. The CFD would provide annual maintenance funding. The green infrastructure is discussed further below.

Urban Agricultural Transition Area

The proposed project would include a passive nature area and agricultural buffer in the northern portion of the project site and an agricultural buffer along the eastern boundary of the project site, which together would constitute the proposed UATA (see Figure 3-16). The UATA would include open space trail connections to the existing Wildhorse Agricultural Buffer to the west of the project site, and would include 10-foot-wide shared-use paths, connecting to existing City of Davis trails to the west and northeast of the project site. The UATA would also include stormwater detention basins serving the project site.

Figure 3-15
Proposed Sewer Infrastructure

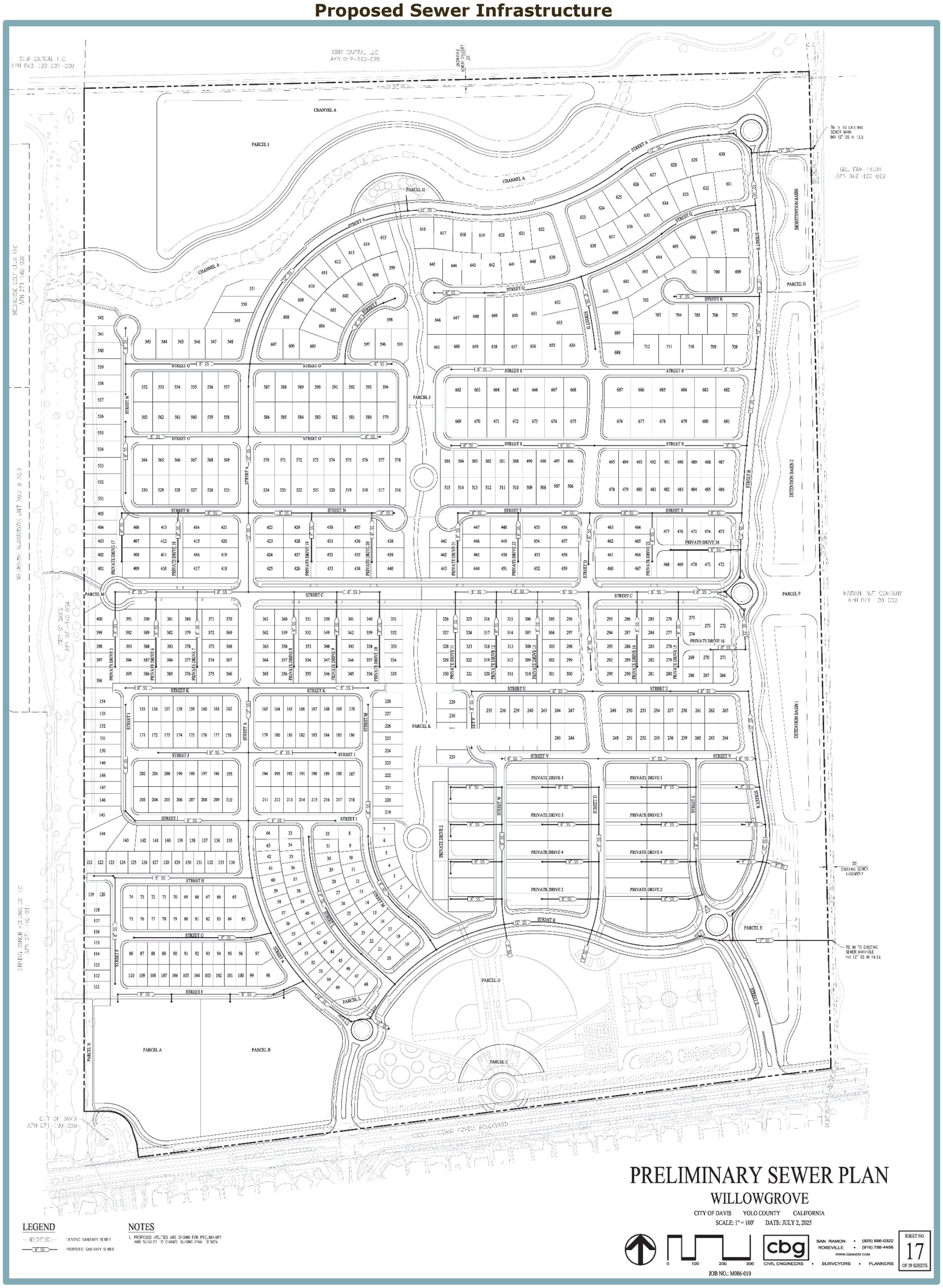


*Figure not OCR compatible.

Figure 3-16
Green Infrastructure Map



*Figure not OCR compatible.

The proposed project would include a total of approximately 44.3 acres of UATA uses. The UATA buffers would be appropriately landscaped for the detention basins and buffer area, with tree groves and native plantings that provide a natural separation between agricultural and urban uses. Davis Municipal Code Section 40A.01.050(b) requires that the UATA have a minimum width of 150 feet.

Neighborhood Greenbelts

The proposed project would include approximately 8.7 acres of neighborhood greenbelts (see Figure 3-17). The North Central Greenbelt would link the proposed community park in the southern portion of the project site to the mini-park and UATA in the northern portion of the project site. The 0.5-mile-long North Central Greenbelt would include a 14-foot-wide shared-use path to support pedestrian access throughout the project site. Two gathering nodes would be included within the North Central Greenbelt. Residential neighborhood design adjacent to the North Central Greenbelt would incorporate street systems that loop or touch the greenbelt with open ended cul-de-sacs, providing access to the greenbelt for each individual neighborhood.

The Central Green Street would link the proposed eastern UATA to the existing Wildhorse Buffer to the west of the project site. A variety of housing types would incorporate private drives or courtyard style dwellings, which would provide exclusive pedestrian access along the Greenbelt. The Central Green Street would include two parallel 10-foot-wide shared-use paths.

Community Park

The two access points into the project site focus on the 16.8-acre community park and 1.7-acre dog park, which are located in the southeastern portion of the site, adjacent to East Covell Boulevard (see Figure 3-18). Pedestrian access would be provided to the community park from existing sidewalks along East Covell Boulevard. Amenities within the community park would include the following:

- Gateway Plaza: The large entry area north of the proposed traffic circle would serve as the gateway into the park from the parking area. The Gateway Plaza would be large enough to accommodate other uses such as farmers markets, community events, and opportunities for public art.
- Transit Station: A transit station with shaded seating and bicycle repair station would be located south of the proposed traffic circle midway along the project frontage. The traffic calming effect of the roundabout would allow transit users to safely access the park facilities from the station.
- Inclusive Playground: A one-acre inclusive playground would be located in the southwestern portion of the community park. The playground would include active options for users of all abilities and ages, and would include one point of entry and a perimeter fence for secure use, wide walkways, and a shade structure with seating and multiple shade trees. The playground restroom (one of two in the park) would be accessible for playground and park users. The restroom would include multi-stall spaces, including a family restroom with adult and baby changing tables. For security, doors would lock automatically from the outside at a set time.

Figure 3-17
Neighborhood Greenbelts



*Figure not OCR compatible.

Figure 3-18
Conceptual Community Park Design

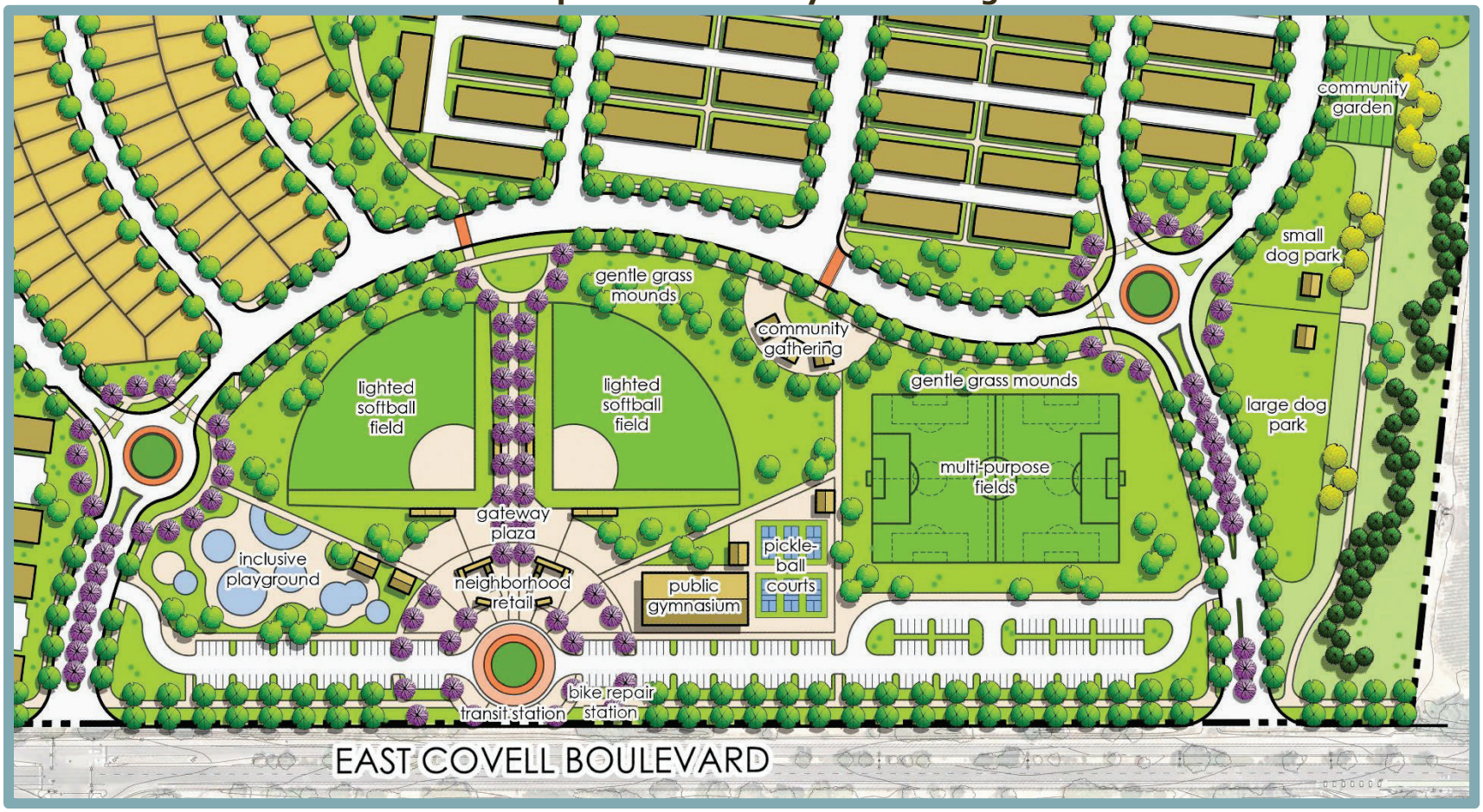


*Figure not OCR compatible.

- Softball Fields: Two lighted, 250-foot fenced softball fields would be located in the northwestern portion of the community park. Each field would include low glare lighting, skinned infield, backstop, fencing around the field perimeter, player dugouts with seating, bleachers, and quick-connect bomber water behind pitching rubber. Fields would support league and tournament play.
- Multipurpose Field: One multipurpose 330-foot by 225-foot field sized for high school soccer or lacrosse would be located in the eastern portion of the community park. Overlay fields would provide two 225-foot by 150-foot U11-12 soccer fields. The field would support league and tournament play.
- Pickleball Courts: Six lighted 20-foot by 44-foot regulation size courts with 10-foot side lines/end lines in the preferred north/south orientation would be located in the central portion of the community park. The pickleball courts would be fully fenced, and a shade structure would be provided.
- Gym/Classroom Building: A 9,500-sf gym/classroom building located in the central portion of the community park would support indoor recreation opportunities such as basketball, futsal, and enrichment programs. The building would include a middle school-size gym with durable rubberized flooring, storage, a large and small classroom, and restrooms with exterior access for gym/classroom users and park users. Gym and classroom access would be provided from exterior doors into individual spaces. The gym/class building would be designed to operate without on-site staff for cost effectiveness.
- Dog Park: A 1.5-acre dog park with separate small and large dog parks would be located to the east and across the street from the community park, with one acre for large dogs and 0.5-acre for small dogs. The dog park would include a perimeter fence, concrete entry, shaded seating, and a water fountain. The dog park would be accessible from connecting trails and from the community park parking lot.
- Community Gathering Space: Three shade structures with a small plaza would be located on the north side of the community park between the softball and multipurpose fields. Ground fault circuit interrupters (GFCI) plugs and after hours security lighting would be included.
- Parking: A total of 215 parking spaces would be provided adjacent to East Covell Boulevard and would be buffered with landscaping, which extends the entire length of the project frontage. Access to the parking lot would be provided from the project entries. Tree wells would be spaced every 50 to 70 feet to create shade and reduce asphalt heat. The parking lot would include 11 EV charging stations and an additional 32 EV capable stalls.
- Walkways: Ten-foot wide walkways would extend from the Central Plaza and provide space for pedestrians and bicyclists, as well as access for maintenance vehicles.
- Grass mounds: Gentle grass mounds with a 5:1 slope for spectator viewing would be located outside the softball outfield fences and on the north side of the soccer field.

The lighted softball fields, multi-purpose field, and pickleball courts would allow extended activity into evening hours, as permitted by the City of Davis. Game play is anticipated on weeknights, with games or tournaments on weekends. After hours low-level security lighting will provide good visibility for safety personnel driving by the park. The park community amenities were designed after initial feedback from City Staff and the final park design and amenities would be approved by the City.

In addition, a 1.5-acre parcel (separate from the community park) would be located directly north of the proposed transit station. A total of 5,000 sf of retail space would include uses such as a

coffee shop/cafe in a modular-style structures that would provide food and beverage service during sporting events, as well as the remainder of the week to neighborhood residents. The neighborhood retail would integrate with the Gateway Plaza and Community Park with emphasis on outdoor seating and welcoming community gathering space.

Mini Park

The 0.6-acre mini park would be located at the north end of the project, accessible from the North Central Greenbelt (see Figure 3-19). The mini park would include a community gathering space, informal green space, and a playground designed for children aged two to five years old.

Project Phasing

Development of the proposed project is anticipated to occur over the course of two phases, each with a backbone component and a development component (see Figure 3-20 through Figure 3-23). Generally, Phase 1 would include the eastern portion of the project site, as well as the affordable multi-family units, and Phase 2 would include the western portion of the project site. The backbone components would include improvements needed to access each development phase, as well as utility and drainage improvements that would serve the proposed project as a whole. The Phase 1 Backbone would include the detention, bioretention, and water quality basins within the UATA, and the widening of East Covell Boulevard.

The development phases would be separated based on product type and density. The Affordable Housing units are identified as Phase 1A within Phase 1 Development to meet the commitment that the project site would be made available to Mutual Housing at the outset of the project site development. Parks, the north/south greenbelt, and community retail would be included in the development phases to provide builders the freedom of constructing such amenities concurrently with residential uses. The Community Park would be developed in Phase 2. The entire project site would be graded in a single phase prior to infrastructure and is anticipated to take approximately 40 days to complete.

Sustainability Plan

With thoughtful design and green building practices expected in Davis, the project applicant has committed to sustainability and advancing the City's 2020-2040 Climate Action and Adaptation Plan (CAAP). Consistent with the CAAP Climate Adaptation Goal to create a cooler city with more urban forest and green space, the proposed project would integrate green space and an urban forest to increase natural shade, reduce urban heat island impacts, and maximize carbon sequestration. Based on the project's Sustainability Plan, the proposed project would plant 2,500 new trees throughout the site to create an urban forest, shaded trails, and neighborhood gathering areas. The enhanced landscaping throughout the project site would include native plants that maximize carbon sequestration while minimizing water consumption. The extensive trail network and existing grade-separated crossing is designed to provide project residents and community park visitors safe active transportation options and to minimize vehicle use. In addition to the bicycle amenities at the transit center, additional bicycle parking would be provided for the parks and public gymnasium. Garages in all single-family and multifamily homes would include dedicated bicycle storage. The proposed project would be all-electric and the proposed residences would include high-efficiency lighting and Energy Star appliances.

Figure 3-19
Conceptual Mini Park Design

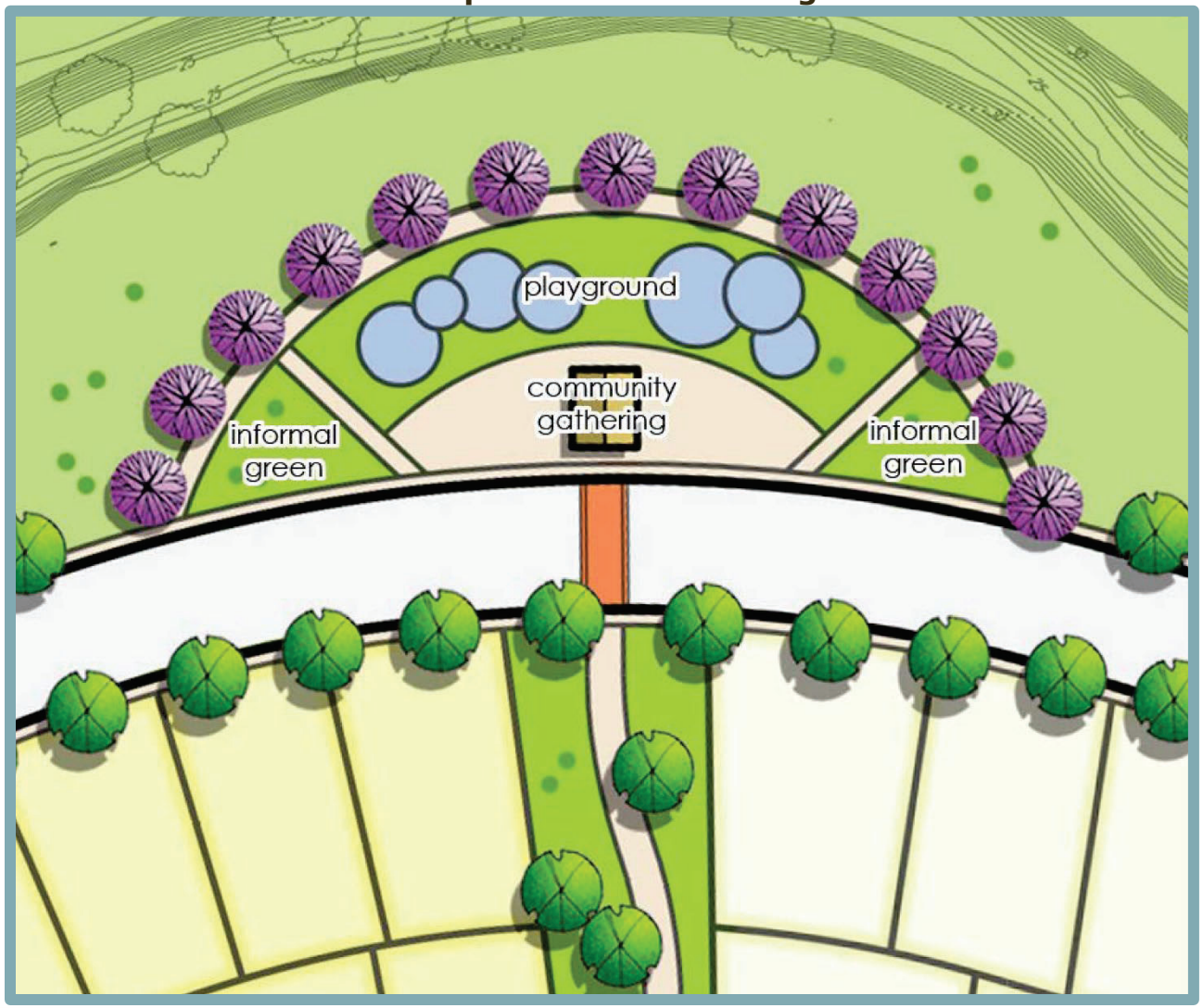


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Figure 3-20
Phase One Backbone Infrastructure

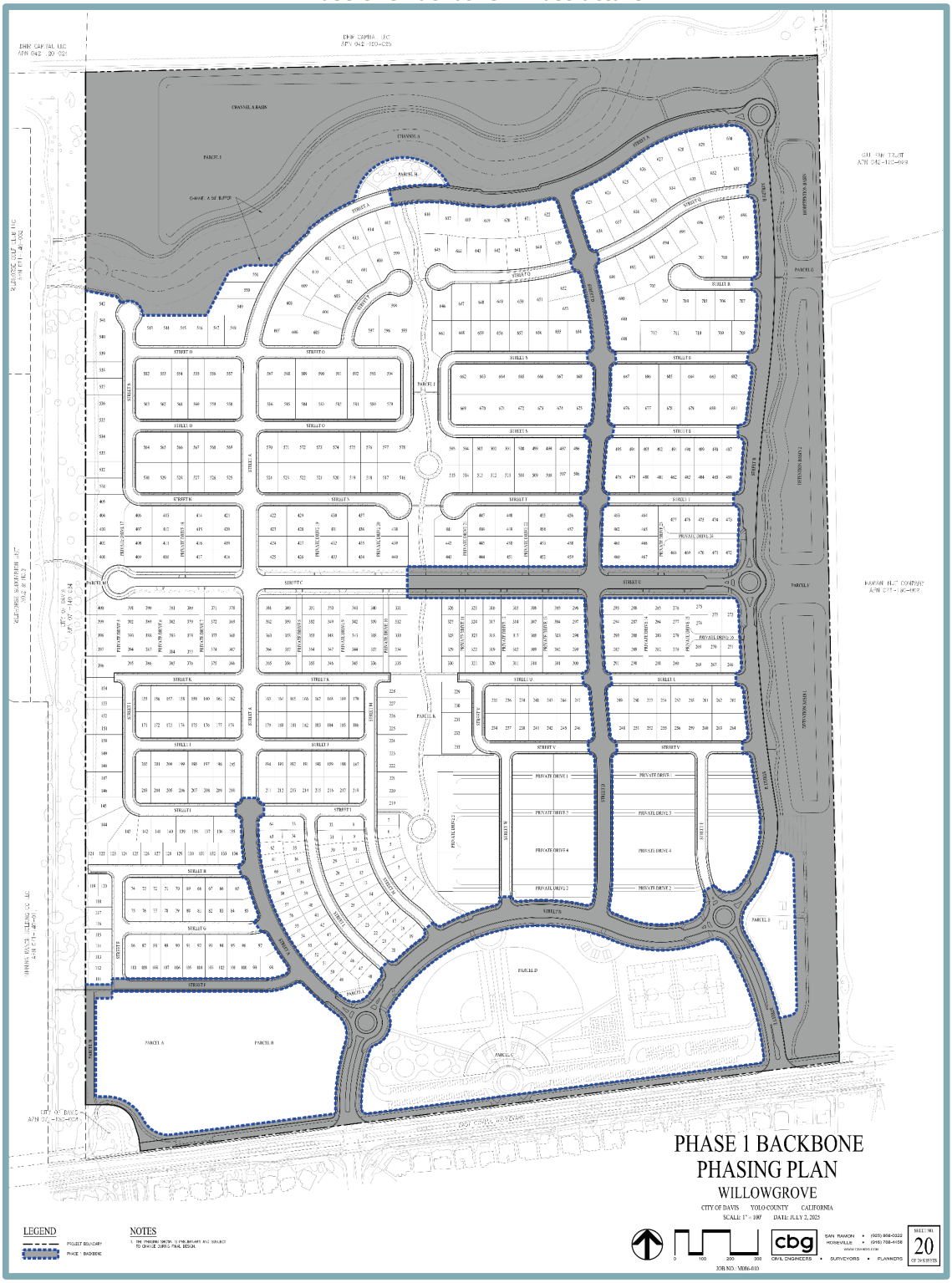


*Figure not OCR compatible.

Figure 3-21
Phase Two Backbone Infrastructure



*Figure not OCR compatible.

Figure 3-22
Phase One Development Plan



*Figure not OCR compatible.

Figure 3-23
Phase Two Development Plan



*Figure not OCR compatible.

All residential units would include a solar photovoltaic system with a minimum 3.0 kilowatt (kW) solar system for low density units, 2.3 kW solar system for medium density units, and 1.6 kW solar system for high density units. Through the provision of roof-top solar, the applicant has committed to generating a minimum of approximately 4,250,000 kWh per year of renewable energy by the proposed residential uses. Single-family and multi-family residential development with garages would pre-install 8-gauge wiring plus reserve room in the electrical panel necessary to support Level 2 electric vehicle charging. Wood-burning fireplaces would be prohibited. The draft Sustainability Plan is included as Appendix D of this EIR, and the final Sustainability Plan will be included as part of the Development Agreement.

Off-Site Improvements

Based on the results of the traffic study, the project would include construction of a 400-foot eastbound left-turn lane at the eastbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection. The 400-foot left-turn lane would be constructed within the raised median that currently has several trees, landscaping, and a street light. In addition, the eastbound right-turn lane at this intersection would be lengthened from 200 to 225 feet, which could likely be accomplished through restriping lanes.

The project would also include the construction of a 250-foot westbound right-turn lane at the westbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access. In addition, the westbound left-turn lane at this intersection would be lengthened from 120 to 200 feet, which could be constructed within the raised median that currently has several trees and landscaping.

Under the cumulative scenario evaluated in the traffic study, it was determined that a second westbound travel lane on East Covell Boulevard would be required along the entire project frontage. In lieu of the above turn lane improvements required in the near-term, the alternative would be to advance the construction of the second westbound lane along the project's frontage. The area of potential effects analyzed for the proposed project includes potential right of way (ROW) and impacts for the addition of the turn lanes or widening of East Covell Boulevard for the entire project frontage.

The proposed project would also include four new pedestrian connections to the existing trail within the adjacent Wildhorse Agricultural Buffer. A tree survey was done of the entire off-site Wildhorse Agricultural Buffer and trail connections were designed to minimize impacts to existing off-site trees and habitat.

As described above, the proposed project would also include off-site connections to the existing water and sewer lines and a crosswalk immediately southeast of the project site to provide pedestrian and active transportation access across East Covell Boulevard to Harper Junior High.

Development Agreement

A Development Agreement between the applicant and the City of Davis would be included as part of the proposed project, which would allow the City and the applicant to enter into an agreement to assure the City that the proposed project would be completed in compliance with the plans submitted by the applicant, and assure the applicant of vested rights to develop the project.

Project Approvals

The following section presents the actions that would be required to implement the proposed project.

City of Davis Discretionary Approvals

Implementation of the proposed project would require the following entitlements from the City of Davis:

1. Certification of the EIR. Before the City can approve the proposed project, the City must certify that the EIR was completed in compliance with the requirements of CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City of Davis.
2. Adoption of a Mitigation Monitoring Plan (MMP). The MMP specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment. The City would also be required to adopt Findings of Fact, and for any impacts determined to be significant and unavoidable, a Statement of Overriding Considerations, as part of project approval.
3. SOI Amendment. Because the project site is outside the City's SOI, the proposed project would require an SOI Amendment to include the site within the City's SOI to allow for the site to be annexed into the City Limits.
4. Annexation. The proposed project would require the annexation of the 232-acre project site into the City of Davis, as well as detachment of the project site from the East Davis Fire Protection District.
5. General Plan Amendment. The proposed project would require a General Plan Amendment to redesignate the 232-acre project site from Yolo County General Plan land use designation of AG to the following City of Davis land use designations:
   - 44.8 acres of LDR;
   - 66.6 acres of MDR;
   - 22.9 acres of HDR;
   - 1.5 acres of Neighborhood Retail;
   - 19.2 acres of Park/Recreation;
   - 8.7 acres of Neighborhood Greenbelt; and
   - 44.3 acres of UATA.

   To anticipate widening required under cumulative conditions, the General Plan Amendment would also amend Table 3 and Map 4 of the Transportation Element to allow for 4+ lanes on the Alhambra Drive to Alhambra Drive segment of the East Covell Boulevard/Mace Boulevard roadway after 2015, if not amended prior to approval of the proposed project.
6. Pre-zoning. The proposed project would require Pre-zoning of the site from the Yolo County zoning designation of A-N to the City of Davis zoning of P-D.
7. Final Planned Development. The proposed project would require a Final Planned Development establishing site development standards (see Appendix E of this EIR).
8. Design Review. The proposed project would require administrative Design Reviews for site plan and architectural review.
9. Small and Large Lot Vesting Tentative Maps. The proposed project would require approval of both Small and Large Lot Vesting Tentative Maps.
10. Affordable Housing Plan. The proposed project would require approval of the project's Affordable Housing Plan(see Appendix F of this EIR).

11. Development Agreement.

Responsible Agency Approvals – Yolo Local Agency Formation Commission

Pursuant to CEQA Guidelines Section 15381, a "responsible agency" is defined as a public agency which proposes to carry out or approve a project, for which a lead agency (in this case, the City of Davis) is preparing or has prepared an EIR. For the purposes of CEQA, the term "responsible agency" includes all public agencies, other than the lead agency, which have discretionary approval power over the project.

The proposed project would require the following approvals from Yolo LAFCo as part of the requested SOI Amendment and Annexation:

1. SOI Amendment in order to bring the project site within the City of Davis SOI (Government Code Section 56428).
2. Annexation of the entire 232-acre project site into the City of Davis (Government Code Section 56737).

The 232-acre project site is currently located within the East Davis Fire Protection District. The East Davis Fire Protection District encompasses a portion of eastern Yolo County, largely east of the City of Davis and west of the City of West Sacramento. The East Davis Fire Protection District consists of mostly agricultural land uses. Annexation of the project site to the City of Davis would also require Yolo County LAFCo approval of detachment of the project site from the East Davis Fire Protection District, as the City of Davis Fire Department would provide fire protection services to the project site upon Annexation.

4. Existing Environmental Setting, Impacts, and Mitigation

4.0 Introduction to the Analysis

4.0 INTRODUCTION TO THE ANALYSIS

4.0.1 INTRODUCTION

The technical chapters of this EIR include the analysis of the potential impacts of buildout of the Willowgrove Project (proposed project) on a range of environmental issue areas. Chapters 4.1 through 4.15 of the EIR describe the environmental setting related to each specific issue area, methods of analysis, project-specific impacts and mitigation measures, and a cumulative impact analysis for each issue area. The format of each of the technical chapters is described at the end of this chapter. It should be noted that technical reports are either attached to this EIR, available by request from the City of Davis, or available on the City's website at: https://www.cityofdavis.org/city-hall/community-development-and-sustainability.

4.0.2 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment (Public Resources Code [PRC] Section 21068). The CEQA Guidelines require that the determination of significance be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified within each technical chapter and are consistent with significance criteria set forth in the CEQA Guidelines or as based on the professional judgment of the EIR preparers.

Significance Criteria

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." In addition, the Guidelines state, "An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." (CEQA Guidelines Section 15382).

As presented in Section 4.0.4 below, the level of significance of an impact prior to mitigation is included at the end of each impact discussion throughout the technical chapters of this EIR.

The following levels of significance prior to mitigation are used in this EIR:

1) Less than Significant: Impacts that may be adverse, but that do not exceed the specified thresholds of significance;
2) Significant: Impacts that exceed the defined standards of significance and require mitigation;
3) Less than Cumulatively Considerable: Where cumulative impacts have been identified, but the project's incremental contribution towards the cumulative impacts would not be considered significant; and
4) Cumulatively Considerable: Where cumulative impacts have been identified and the project's incremental contribution towards the cumulative impacts would be considered significant.

If an impact is determined to be significant or cumulatively considerable, mitigation is included, if available, in order to reduce the specific impact to the maximum extent feasible. A statement of the level of significance of an impact after mitigation is also included in each impact discussion throughout the technical chapters of this EIR. The following levels of significance after implementation of mitigation are used in the EIR:

1) Less than Significant: Impacts that exceed the defined standards of significance but can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures;
2) Less than Cumulatively Considerable: Where the project's incremental contribution towards cumulative impacts would be eliminated or reduced to a less than cumulatively considerable level through the implementation of feasible mitigation measures; and
3) Significant and Unavoidable Impact: An impact (project-level or cumulative) that cannot be eliminated or reduced to a less-than-significant or less than cumulatively considerable level through the implementation of feasible mitigations measures.

Each environmental area of analysis uses a distinct set of significance criteria. The significance criteria are identified at the beginning of the Impacts and Mitigation Measures section in each of the technical chapters of this EIR. Although significance criteria are necessarily different for each resource considered, the provided significance levels ensure consistent evaluation of impacts for all resource areas evaluated.

4.0.3 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

The EIR provides the analysis necessary to address the technical environmental impacts of the proposed project. The following environmental issues are addressed in the separate technical chapters of this EIR:

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

Chapter 5, Effects Not Found to be Significant, addresses the project's effects that were determined not to be significant, and thus, are not discussed in detail in a technical chapter of the EIR. See Section 6.3, Cumulative Impacts, of Chapter 6, Statutorily Required Sections, for additional information on the scope of the cumulative impact analysis for each environmental issue area addressed in the EIR.

4.0.4 TECHNICAL CHAPTER FORMAT

Each technical chapter addressing a specific environmental issue begins with an **introduction** describing the purpose of the section. The introduction is followed by a description of the project's **existing environmental setting** as the setting pertains to that particular issue. The setting description is followed by the **regulatory context** and the **impacts and mitigation measures** discussion, which contains the **standards of significance**, followed by the **method of analysis**. The standards of significance section includes references to the specific checklist questions consistent with Appendix G of the CEQA Guidelines. The **impacts and mitigation measures** discussion includes impact statements prefaced by a number in bold-faced type and an analysis of potential impacts for the proposed project, as well as cumulative analyses. An explanation of each impact and an analysis of the impact's significance follow each impact statement, followed by all mitigation measures pertinent to each individual impact (see below). The degree of relief provided by identified mitigation measures is also evaluated. An example of the format is shown below.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance.

4.x-1 Statement of Project-Specific Impact

Discussion of impact for the proposed project in paragraph format.

Statement of ***level of significance*** of impact prior to mitigation is included at the end of each impact discussion. The following levels of significance are used in the EIR: less than significant, significant, or significant and unavoidable. If an impact is determined to be significant, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to a less-than-significant level with implementation of all feasible mitigation would be considered to remain significant and unavoidable.

Mitigation Measure(s)

Statement of *level of significance* after the mitigation is included immediately preceding mitigation measures.

4.x-1(a) *Required mitigation measure(s) presented in italics and listed in consecutive order.*

4.x-1(b) *Required additional mitigation measure, if necessary.*

Cumulative Impacts and Mitigation Measures

The following discussion of cumulative impacts is based on implementation of the proposed project in combination with cumulative development within the applicable area or region.

4.x-2 Statement of Cumulative Impact

Discussion of cumulative impacts for the proposed project in paragraph format.

As discussed in detail in Chapter 6, Statutorily Required Sections, of the EIR, the cumulative setting for the proposed project is generally considered to be development anticipated to occur through buildout of the Davis General Plan (i.e., City of Davis), as well as a list of past, present, and probable future projects.

Statement of ***level of significance*** of cumulative impact prior to mitigation is included at the end of each impact discussion. The following levels of significance are used in the EIR for cumulative impacts: less than significant, less than cumulatively considerable, cumulatively considerable, or significant and unavoidable. If an impact is determined to be cumulatively considerable, mitigation will be included in order to reduce the specific impact to the maximum extent feasible. Impacts that cannot be reduced to less-than-significant or less than cumulatively considerable levels with the implementation of all feasible mitigation would be considered to remain significant and unavoidable.

Mitigation Measure(s)

Statement of *level of significance* after the mitigation is included immediately preceding mitigation measures.

4.x-2(a) *Required mitigation measure(s) presented in italics and listed in consecutive order.*

4.x-2(b) *Required additional mitigation measure, if necessary.*

4.1. Aesthetics

4.1 AESTHETICS

4.1.1 INTRODUCTION

The Aesthetics chapter of the EIR describes existing aesthetic resources in the area of the project site and the broader region, and evaluates the potential aesthetic impacts of the proposed project. CEQA describes the concept of aesthetic resources in terms of scenic vistas, scenic resources (such as trees, rock outcroppings, and historic buildings within a State scenic highway), and the existing visual quality or character of the project area. In addition, pursuant to CEQA Guidelines, this chapter describes potential impacts related to light and glare. The following analysis is based on information drawn from the City of Davis General Plan[1] and the City of Davis General Plan EIR.[2]

Pursuant to the court ruling in *Preserve Poway v. City of Poway* (2016) 245 Cal. App.4th 560 [199 Cal.Rptr. 3d 600], community character is separate and apart from aesthetic impacts and, thus, is not a CEQA issue. Rather, the analysis of aesthetics should be limited to tangible, physical evidence that a project is visually inconsistent with the surrounding community (rather than a psychological "feel"). Therefore, where applicable, the analysis presented within this chapter focuses on potential physical changes to the visual composition of the project site and surrounding area, rather than overall community character.

The CEQA Guidelines differentiate between how urban and non-urban sites proposed for development could result in potential impacts to public views of the sites. Appendix G, Section I, Question 'c,' defines public views as those that are experienced from a publicly accessible vantage point. The sample Initial Study checklist found in Appendix G to the CEQA Guidelines suggests that different aesthetic standards apply in "non-urbanized" and "urbanized areas," respectively. For non-urbanized areas, the inquiry asks whether a proposed project "would substantially degrade the existing visual character or quality of public views of the site and its surroundings." For urbanized areas, the question is whether the project would "conflict with applicable zoning and other regulations governing scenic quality." Under the CEQA Guidelines, "urbanized area" is a term of art defined in CEQA Guidelines Section 15387 as "a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile."

The likely reason that the California Natural Resources Agency (CNRA), in fashioning the inquiries in Appendix G, suggests different approaches to aesthetic analyses in non-urbanized areas and urbanized areas is CNRA did not want purely aesthetic concerns – such as height and mass by themselves – to deter dense, land-efficient development in urbanized areas. In such highly developed areas, additional high-density development can reduce the long-term environmental effects of what is often called sprawl by making an efficient use of areas that are already highly urbanized. Thus, projects proposed in such areas only require an evaluation of consistency with City or County regulations that govern scenic quality, such as design guidelines (See *Bowman v. City of Berkeley* [2004] 122 Cal.App.4th 572, 592, 594 ["[t]he aesthetic difference

1 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
2 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.

between a four-story and a three-story building on a commercial lot on a major thoroughfare in a developed urban area is not a significant environmental impact, even under the fair argument standard"; "[w]here a project must undergo design review under local law that process itself can be found to mitigate purely aesthetic impacts to insignificance"]).

In contrast, Public Resources Code (PRC) Section 21061.3 defines an "infill site" as a site in an urbanized area that has not been previously developed for urban uses and is both located immediately adjacent to parcels that are developed with urban uses, or at least 75 percent of the perimeter of the site adjoins parcels that are developed with qualified urban uses, and the remaining 25 percent of the site adjoins parcels that have been previously developed with urban uses, and is a site within which parcels have not been created within the past 10 years. Based on the foregoing definition, because the project site is only surrounded to the west and south by urbanized development, and the areas to the north and east of the site consist of agricultural land, the City has undertaken the inquiry appropriate for "non-urbanized areas."

Additionally, CEQA case law has established that EIRs are not required to consider impacts on private views and may limit their analysis of aesthetic effects to impacts on public views. For example, in *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 492-494, the court held that a County, in preparing an EIR for a proposed condominium project, acted within its discretion in choosing not to consider private views. The court noted that "California landowners do not have a right of access to air, light and view over adjoining property" and added that "[u]nder CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons[,]" (*Id*. at p. 492). In this same vein, another court, in *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188, 195, observed that "all government activity has some direct or indirect adverse effect on some persons." Such conclusions are consistent with the inquiries set forth in Appendix G of the CEQA Guidelines, which, as previously discussed, ask whether projects outside urbanized areas would "substantially degrade the existing visual character or quality of *public* views" of a project site and its surroundings (italics added). In light of such considerations, the extent to which the proposed project could substantially degrade the existing visual character or quality of views of the site and its surroundings is considered within the context of those who would view the site from public areas, rather than adjacent private neighborhoods.

4.1.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing conditions of visual resources in the project region and within the vicinity of the project site.

Visual Character of the Region

The City's planning area, comprised of approximately 160 square miles, is located 11 miles west of Sacramento and approximately 79 miles northeast of the City of San Francisco. The planning area consists of approximately 160 square miles and is characterized by agricultural/open space landscapes to the north, west, and south; highly developed urban landscapes within the City Limits; and open space lands, including the Yolo Bypass Wildlife Area, to the east. Views from agricultural fields are enclosed on the west of the planning area by the Coast Range hills. Views of other directions are open to the horizon, although the Sierra Nevada Mountain range, Sutter Buttes, and Mount Diablo can be seen on clear days. The University of California, Davis (UC Davis) campus is located adjacent to the southwest corner of the City and occupies a total of 2,900 unincorporated acres, including the more-than-100-acre UC Davis Arboretum, which is

comprised of demonstration gardens, scientific collections, and the Putah Creek Riparian Reserve. The Davis General Plan does not designate scenic vistas within the City's planning area.

City of Davis Priority Acquisition Areas

The City of Davis designates open space lands and resources surrounding the City as priority acquisition areas to identify the land and resource values desirable to the community and better organize the City's priorities. The project site is located within a priority acquisition area and is identified as affording views of the City of Sacramento skyline looking east.

State Scenic Highways

Designated State scenic highways are not currently located in the vicinity of the City of Davis. According to the California Department of Transportation (Caltrans) map of designated and eligible scenic routes under the California Scenic Highway Program, the nearest officially designated State scenic highway to the project site is State Route (SR) 160, located approximately 11.5 miles southeast of the City Limits.[3]

Visual Character of the Project Site and Surrounding Area

The following information provides an overview of the physical conditions of the project site and surrounding area in relation to visual character.

Project Site

The approximately 232-acre project site is located north of the intersection of East Covell Boulevard and Alhambra Drive in a currently unincorporated portion of Yolo County. The site consists of open, agricultural land currently planted with row crops adjacent to the northeastern boundary of the City of Davis, and is generally flat. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately five to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

Surrounding Areas

The project site is bounded by East Covell Boulevard to the south; the Wildhorse Agricultural Buffer to the west, the majority of which is approximately 200 feet wide; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development and the Wildhorse Golf Course to the west; and single-family residences associated with Mace Ranch and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south, across East Covell Boulevard.

Off-Site Improvement Areas

The proposed off-site improvements include new connections between the proposed on-site sidewalks and shared-use paths and existing off-site City of Davis trails. The off-site trails are located to the west (i.e., Wildhorse Agricultural Buffer) and south (i.e., existing undercrossing at

[3] California Department of Transportation. *California State Scenic Highway System Map.* Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed May 2025.

East Covell Boulevard) of the project site. The project would also include construction of one left-turn and one right-turn lane at the East Covell Boulevard/Alhambra Drive/westerly site access intersection, and a second East Covell Boulevard westbound lane along the project frontage. The proposed project would also include off-site connections to the existing water and sewer lines and a crosswalk immediately southeast of the project site to provide pedestrian and active transportation access across East Covell Boulevard to Harper Junior High.

Viewer Types

Viewer types in the vicinity that have public views of the project site include the following:

- *Motorists* along east- and westbound East Covell Boulevard and northbound Alhambra Drive have existing views of the project site while driving past the site.
- *Pedestrians and bicyclists* in the area include nearby residents and visitors that use the public roadways to walk or bike to their destination. Such pedestrians have views of the project site from East Covell Boulevard, Alhambra Drive, the off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail for pedestrians from April to October), and the existing grade-separated crossing of East Covell Boulevard to the southwest of the site. In general, views experienced by pedestrians and bicyclists are similar to views experienced by motorists.
- *Recreationists* include those individuals who are involved in recreational activities and have views of the project site. The group includes individuals visiting the Wildhorse Golf Course or the Wildhorse Agricultural Buffer to the west.

Existing Conditions of Key Views

Key public viewpoints that would most clearly display the proposed project's potential visual effects have been selected for in-depth analysis. The segments of East Covell Boulevard within the project vicinity, as well as a view from the existing residential neighborhood to the west, are characterized as key viewpoints (see Figure 4.1-1). Figure 4.1-2 shows views from the Wildhorse Agricultural Buffer, and Figure 4.1-3 through Figure 4.1-5 provide examples of public views of the site from East Covell Boulevard. In addition, although not captured in the figures showing views from the project site, the City's priority acquisition area map identifies that views of the City of Sacramento skyline may be visible from the site, depending on conditions (see Figure 4.1-6).

Key Viewpoint #1

Key Viewpoint #1 represents the view of the project site looking east from the Wildhorse Agricultural Buffer. As shown in Figure 4.1-2, the foreground is dominated by a chain-link fence separating the Wildhorse Agricultural Buffer pedestrian trail from an access road associated with the existing on-site agricultural uses. The midground is comprised of agricultural row crops, and background views consist of distant trees and vegetation, City of Sacramento building outlines, and open sky.

Key Viewpoint #2

Key Viewpoint #2 represents the existing view looking northeast towards the project site from the southernmost end of the Wildhorse Agricultural Buffer pedestrian trail, where the trail intersects with East Covell Boulevard (see Figure 4.1-3). Foreground views consist of disturbed dirt and vegetation between East Covell Boulevard and the existing agricultural crops. Midground views consist of an irrigation pipeline, crops, and trees. Background views are overall similar to Key Viewpoint #1, and consist of distant trees and vegetation, City of Sacramento building outlines, and open sky.

Figure 4.1-1
Key Viewpoint Locations and Orientations



*Figure not OCR compatible.

Figure 4.1-2
Existing View of Site from Wildhorse Agricultural Buffer Looking East (Key Viewpoint #1)



Figure 4.1-3
Existing View of Project Site from East Covell Boulevard Looking Northeast (Key Viewpoint #2)



Figure 4.1-4
Existing View of Project Site from East Covell Boulevard Looking North (Key Viewpoint #3)



Figure 4.1-5
Existing View of Project Site from East Covell Boulevard Looking Northwest (Key Viewpoint #4)

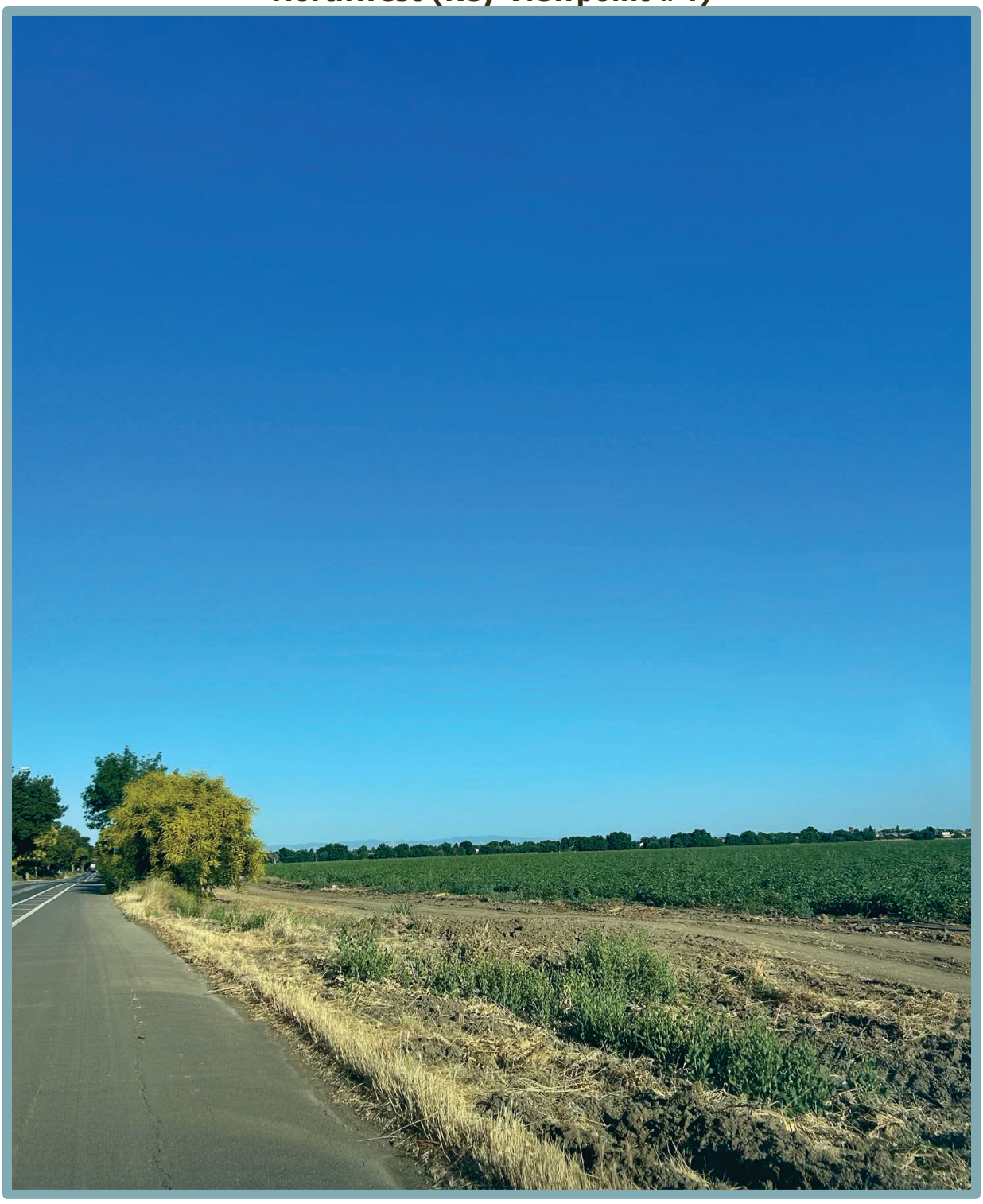


Figure 4.1-6
Priority Acquisition Area Map

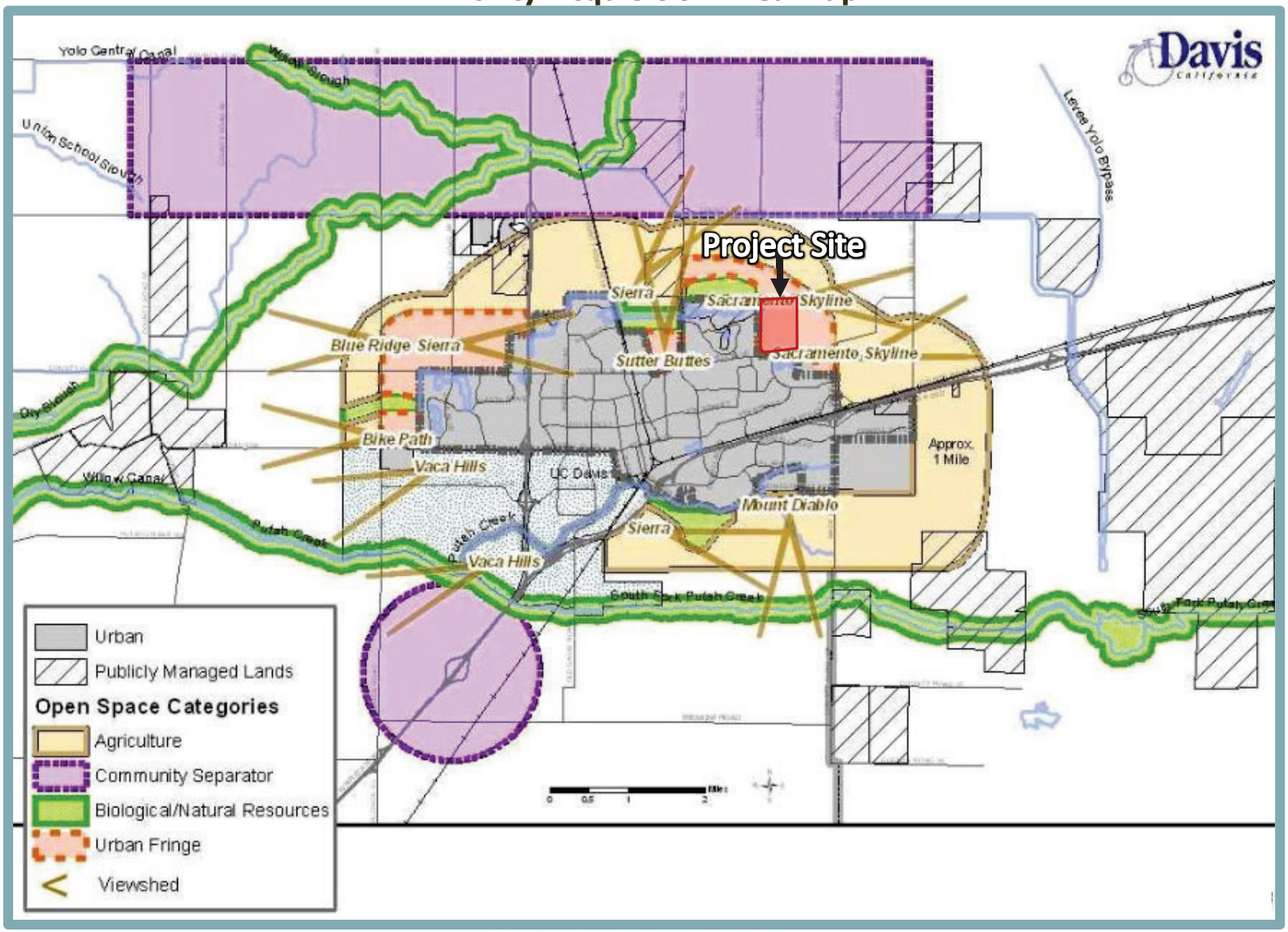


*Figure not OCR compatible.

Key Viewpoint #3

Key Viewpoint #3 represents existing views of the project site looking north from East Covell Boulevard (see Figure 4.1-4). Foreground views include ruderal vegetation, grasses, and a tree that have been established within the disturbed dirt between the roadway and the existing on-site agricultural uses. Similar to Key Viewpoint #2, midground views consist of the irrigation pipeline and, beyond that, the on-site row crops. Background views consist of distant trees and vegetation, as well as open sky.

Key Viewpoint #4

Key Viewpoint #4 represents existing views of the project site looking northwest from the southeasternmost corner of the site on East Covell Boulevard near Harper Junior High (see Figure 4.1-5). Similar to the aforementioned key viewpoints, foreground views include ruderal vegetation, grasses, and trees that have grown within the disturbed dirt between the roadway and the existing on-site agricultural uses. Midground views consist of the on-site row crops and background views consist of trees and homes in the Wildhorse neighborhood.

Light Pollution and Glare

Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, sky glow, and excessive illumination at an intensity that is inappropriate. Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species.

Currently, the project site is primarily characterized by an undeveloped, unlit landscape. As such, significant sources of light and glare do not currently occur on-site. However, the project site is located within the vicinity of existing residential uses to the west and south of the site. Lighting associated with such development, as well as street lighting along East Covell Boulevard and headlights from vehicles traveling on the roadways, contribute to the overall nighttime lighting environment of the project area.

4.1.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to aesthetics do not exist. The existing State and local laws and regulations applicable to the proposed project are listed below.

State Regulations

The following is an applicable State regulation related to aesthetic resources.

California Scenic Highway Program

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The State Legislature lists highways that are eligible for designation in California Streets and Highways Code Sections 260 through 284. In order for an eligible highway to be officially designated by Caltrans, the local government with jurisdiction over the land that abuts the highway must adopt a program that limits development, outdoor advertising, and earthmoving along the highway segment, pursuant to Caltrans' approval of the program criteria.

Local Regulations

The following local regulations are applicable to the proposed project.

City of Davis General Plan

The City of Davis General Plan urban design goals and policies that are applicable to the proposed project are presented below.

Urban Design, Neighborhood Preservation and Community Forest Management Chapter

Goal UD 1 Encourage community design throughout the City that helps to build community, encourage human interaction, and support non-automobile transportation.

Policy UD 1.1 Promote urban/community design which is human-scaled, comfortable, safe, and conducive to pedestrian use.

Goal UD 2 Maintain an aesthetically pleasing environment and manage a sustainable community forest to optimize environmental, aesthetic, social, and economic benefits.

Policy UD 2.1 Preserve and protect scenic resources and elements in and around Davis, including natural habitat and scenery and resources reflective of place and history.

Policy UD 2.2 Maintain and increase the amount of greenery, especially street trees, in Davis, both for aesthetic reasons and to provide shade, cooling, habitat, air quality benefits, and visual continuity.

Policy UD 2.3 Require an architectural "fit" with Davis' existing scale for new development projects.

Policy UD 2.4 Create affordable and multi-family residential areas that include innovative designs and on-site open space amenities that are linked with public bicycle/pedestrian ways, neighborhood centers, and transit stops.

Goal UD 3 Use good design as a means to promote human safety.

Policy UD 3.1 Use good design to promote safety for residents, employees, and visitors to the City.

Policy UD 3.2 Provide exterior lighting that enhances safety and night use in public spaces, but minimizes impacts on surrounding land uses.

Goal UD 4 Create an urban design framework that would strengthen the physical form of the city.

Policy UD 4.1 Develop an urban design framework plan to consolidate and clarify the relevant design concepts in this chapter and other chapters to promote a positive and memorable image for the city and to reinforce the functional systems of the city such as land use, circulation, and open space.

Goal UD 6 Strengthen the city's neighborhoods to retain desirable characteristics while allowing for change and evolution, promoting public and private investments, and encouraging citizen involvement in neighborhood planning.

Policy UD 6.1 Recognize the existence of individual neighborhoods with general boundaries and facilitate the development of neighborhood strategies in partnership with residents and property owners. The strategies should recognize the unique characteristics of the individual neighborhood and the potential for change, within the context of a well-planned city. The strategies should be directed toward solving unique neighborhood problems and implementing neighborhood priorities and enhancing livability.

Outdoor Lighting Control Ordinance

The City enacted the Outdoor Lighting Control Ordinance in 1998. The ordinance, set forth by Davis Municipal Code Article 8.17, commonly referred to as the City's "Dark Sky Ordinance," provides standards for outdoor lighting in an effort to minimize light pollution, glare, and light trespass caused by inappropriate or misaligned light fixtures, while improving nighttime public safety, utility, and security and preserving the night sky as a natural resource, thus, facilitating people's enjoyment of stargazing. The Outdoor Lighting Control Ordinance does not apply to interior lighting, including lighting at greenhouse facilities. Single-family and duplex residential properties are exempted.

Priority Acquisition Areas

The City of Davis accomplishes its open space protection goals by setting policy and acquiring conservation easements and ownership of land from willing sellers. Open space lands and resources are designated by the City as one of five acquisition categories, which are intended to identify the land and resource values desirable to the community and better organize the City's priorities. The land categories are as follows:

- **Urban Fringe:** Land near the City Limits which provides an adequate buffer between urban and rural land uses. Such lands are generally located in the historic path of development on the north and west edges of the City and, thus, are at greatest risk of conversion from urban expansion pressures. Urban fringe areas are linked with the City's growth management policies encouraging infill development and coordination of university housing needs.
- **Community Separator:** Land between the City of Davis and neighboring cities which shall be protected to preserve the unique character of each community and limit urban expansion pressures from adjoining cities/counties. The cities of Davis, Woodland, and Dixon, as well as Yolo County, have signed general agreements identifying separator areas and supporting land protection within the boundaries of such areas.
- **Agriculture:** Prime agricultural lands facing the greatest risk of conversion and other lands with sustainable farming practices (e.g., organic agriculture) shall be protected to maintain the long-term viability of agriculture in the area. Such lands are generally located in the historic path of development to the north and west of the City.
- **Biological and Natural Resources:** Important wildlife habitat, sensitive species, and other significant natural resources shall be protected to conserve and enhance biologically unique areas that contribute to the viability and stability of natural communities. Such lands

generally contain riparian corridors, remnant oak woodlands, wetlands, and/or remnant grasslands, and can be enhanced or restored to provide additional wildlife habitat.

- **Scenic Resources:** Land which provides views and scenic vistas of significant landmarks, such as nearby and distant mountain ranges. Such lands shall be conserved to preserve community identity through the protection of views of significant local and regional landmarks. Scenic resource areas generally overlap the Urban Fringe and Community Separator areas.

The City's priority acquisition area map is shown in Figure 4.1-6. As shown therein, the project site is considered an Urban Fringe area with potential views of the City of Sacramento skyline to the east.

4.1.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to aesthetics. A discussion of the impacts, as well as mitigation measures, where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, an impact related to aesthetics is considered significant if the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway (see Chapter 5, Effects Not Found to be Significant);
- In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

As noted above, issues related to whether the proposed project would result in any of the following impacts are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.

Method of Analysis

The section below gives full consideration to the development of the proposed project and acknowledges physical changes to the existing setting. The standards of significance listed above are used to delineate the significance of any visual alterations of the site. As previously discussed, consistent with CEQA Guidelines Section 15387 and CEQA case law, the project site is identified as being within a "non-urbanized area," given that the site is not surrounded on at least 75 percent of the site perimeter by urbanized uses. Therefore, the appropriate inquiry to apply to the proposed project is for "non-urbanized areas" and if the proposed project would include alterations that would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to aesthetics is based on development of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.1-1 Have a substantial adverse effect on a scenic vista. Based on the analysis below, the impact would be *less than significant.*

Examples of typical scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing or sightseeing. In general, a project's impact to a scenic vista would occur if development of the project would substantially change or remove a scenic vista. As previously discussed, the City's General Plan does not designate scenic vistas within the City's planning area. Additionally, State scenic highways have not been designated within the City or in the vicinity of the project site.

Considering that new scenic vistas have not been identified within the project site or the site vicinity since the City's certification of the General Plan EIR, the proposed project would not result in a substantial adverse effect to a scenic vista. Furthermore, based on the characteristics of the area, the project site and surrounding area lack defining features of particular aesthetic prominence that could contribute to the area being considered an undesignated scenic vista. For example, sweeping mountain views are not afforded from the project site or immediate environs, nor are prominent natural features such as rivers or lakes.

Based on the above, although the proposed project would alter views from adjacent areas, the project would not result in a substantial adverse effect to a scenic vista, and a ***less-than-significant*** impact would occur related to such effects.

Mitigation Measure(s)

None required.

4.1-2 In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality. Based on the analysis below, the impact is *significant and unavoidable*.

The project site is located within a non-urbanized area; therefore, the relevant threshold is whether the proposed project would substantially degrade the existing visual character or quality of public views of the site and its surroundings. In general, the proposed project would consist of a mixed-use community, including a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences across various residential neighborhoods for an overall net residential density of approximately 11.9 dwelling units per acre (du/ac). In addition, the proposed project would include transit improvements; neighborhood retail uses; a

daycare facility; associated on-site roadway improvements; utility improvements; and recreational uses, such as a community park, mini park, and a gym, open space, and greenbelts. The new residential units would be constructed in accordance with the applicable development standards established in the Final Planned Development for each relevant PD Subarea, including, but not limited to, those related to building height, lot area and width, setbacks, open space, and yard requirements.

In addition, the proposed project would include a Development Agreement between the applicant and the City of Davis. The Development Agreement would allow the City and the applicant to enter into an agreement with the City to assure that the project is completed in compliance with the plans submitted by the applicant and to assure the applicant of vested rights to develop the project. The P-D zoning for the site would establish the necessary zoning regulations and appropriate site design, with the Final P-D specifying appropriate building and development standards. Consistent with Section 40.22.090 of the Davis Municipal Code, the final application of the Planned Development (P-D) zone must contain information related to the land uses proposed for the P-D zone, development standards, location of parks and trails, proposed street layout, and a proposed tentative subdivision map. Compliance with the requirements of Section 40.22.090 would ensure that the proposed project would include appropriate development standards related to the visual compatibility with surrounding existing uses. Finally, consistent with Article 40.31 of the City's Municipal Code, the Design Review process for the site plans and architecture of buildings, signage, and improvements is required to ensure that proposed structures are aesthetically consistent with the existing development in the vicinity of the project site. With respect to the proposed project, such surrounding development would include the single-family residences to the west and south of the site. The City's Design Review process would also ensure consistency with applicable City policies, such as General Plan Policy UD 2.3 and UD 2.5.

The proposed project would also include construction of off-site roadway improvements, including the following: a 400-foot eastbound left-turn lane at the eastbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection; a 250-foot westbound right-turn lane at the westbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access; and a second westbound travel lane on East Covell Boulevard along the entire project frontage. With respect to the existing lanes in the project area, the existing eastbound right-turn lane at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection would be lengthened from 200 to 225 feet, likely through restriping lanes. In addition, the existing westbound left-turn lane would be lengthened from 120 to 200 feet within the currently landscaped median. Finally, the proposed project would construct a crosswalk immediately southeast of the project site to provide access across East Covell Boulevard to Harper Junior High.

The foregoing off-site improvements would be located within or adjacent to existing roadways and would not include the development of vertical structures that could obstruct existing views. However, the proposed 400-foot left-turn lane would be constructed within an existing raised median that currently has several trees, landscaping, and a street light. In addition, the required westbound right-turn lane would likely encroach into the project's 25-foot landscape setback. Therefore, the off-

site improvements associated with the proposed project could degrade the existing visual character of the area.

As indicated in Chapter 3, Project Description, of this EIR, a second westbound travel lane on East Covell Boulevard would be required along the entire project frontage under the cumulative scenario evaluated in the project-specific traffic study. In lieu of turn lane improvements required in the near-term, the proposed project could advance the construction of the second westbound lane along the project's frontage. Under either approach, aesthetic impacts would be minimal.

Development of the foregoing project components would entirely replace views of the existing agricultural field with the proposed residential, neighborhood retail, and recreational uses. For example, the proposed residences would be visible from Key Viewpoint #1 and the existing single-family residential neighborhood to the west of the site, replacing existing views of the on-site fields. In addition, views of the proposed neighborhood retail and recreational uses would be visible from Key Viewpoints #3 and #4. The proposed parks, open space, and greenbelt components would account for a total of 72.2 acres of green space, which would ensure that part of the existing visual character of the area is maintained from Key Viewpoint #4. Existing distant views from the Wildhorse Agricultural Buffer pedestrian trail of the City of Sacramento skyline, which are identified by the City as potentially visible from the northern project site boundary, would also be blocked by the proposed project.

The proposed Urban Agricultural Transition Area (UATA) in the northern and eastern portions of the site would serve as a buffer between the surrounding agricultural land and the areas developed as part of the proposed project. The City generally allows public access and various recreational uses, as well as open space preservation uses such as native plants, tree or hedge rows, drainage channels, stormwater retention ponds, and natural areas, within the UATA. The on-site UATA buffers would be appropriately landscaped for the detention basins and buffer area, with tree groves and native plantings that would provide a natural separation between agricultural and urban uses. The City of Sacramento skyline would be visible from the proposed trails within the UATA.

The parking spaces, transit station, and Residential High Density (HDR) units provided adjacent to East Covell Boulevard would be buffered with landscaping, which extends the entire length of the project frontage. The separated sidewalk included as part of the proposed project would include trees 35 feet on center in the landscape strip, as well as a second row of trees triangularly spaced behind the sidewalk. Such landscaping trees would create shade and reduce asphalt heat. Because the project would include landscape buffers, including along East Covell Boulevard, the site would be partially screened from views along the roadway. In addition, motorists traveling along East Covell Boulevard, which has a speed limit of 40 miles per hour (mph), would have temporary views of the project site.

Nonetheless, given that the proposed project would convert views of the site from the existing rural landscape to a mixed-use development, the existing visual character and quality of public views of the project site would be significantly altered.

Based on the above, although the inclusion of landscaping trees and buffers would partially obscure views of the project site and foreground views would be of open space in some areas, the existing visual character and quality of public views of the site would be substantially degraded by development of the proposed project. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Although the proposed project would reduce the severity of the aesthetic impact of the proposed project through the incorporation of landscaping and buffers, feasible mitigation does not exist to reduce the above impact to a less-than-significant level. Due to the substantial degradation of the existing visual character and public views of the project site, the impact associated with development of the proposed project would remain *significant and unavoidable*.

4.1-3 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As noted previously, the project site is primarily characterized by an undeveloped, unlit landscape. The proposed project would consist of a mixed-use community, including a total of 1,250 dwelling units; transit improvements; neighborhood retail uses; a daycare facility; on-site roadway improvements; utility improvements; recreational uses, including parks, a gym, open space, and greenbelts; and off-site roadway improvements, including the restriping of existing lanes and construction of new turn lanes. The change from an agricultural property to a mixed-use development would generate new sources of light and glare. New sources of light would include exterior light sources associated with the new uses, such as lights installed within porches, patios, and parking lots; architectural accent lighting; motion-activated security lighting; driveway lighting; landscape lighting; and interior lighting visible through windows. The proposed softball fields and pickleball courts within the northwestern and central portions of the proposed community park, respectively, would also include lighting. As noted in Chapter 3, Project Description, of this EIR, the lighting for the softball fields would be low glare. New sources of glare would occur primarily from the windshields of vehicles travelling within the project site, as well as through the use of reflective building materials, including polished steel and reflective glass.

All exterior lighting installed as part of the proposed project would be designed consistent with General Plan Policy UD 3.2, ensuring shielding fixtures are installed in such a manner as to prevent direct rays from passing property lines or into the public right-of-way. In addition, new lighting would be required to comply with the City's Outdoor Lighting Control Ordinance, which provides standards for outdoor lighting to minimize light pollution, glare, and light trespass. Compliance with General Plan Policy UD 3.2 and the City's Outdoor Lighting Control Ordinance would ensure that development of the proposed project does not result in new sources of substantial light. Furthermore, the project site would include internal greenbelts and buffers, which would occur along portions of all the site's boundaries and adjacent to or within the proposed residential villages. The project site is also located adjacent to the existing Wildhorse Agricultural Buffer, which would act as a buffer between the project site and

the existing residential development to the west. The proposed greenbelts would include new landscaping vegetation, which would serve to reduce new sources of glare from project-generated traffic and new reflective surfaces at surrounding existing uses.

However, because the types of lighting and the specific locations have not yet been finalized, compliance with General Plan Policy UD 3.2 and the City's Outdoor Lighting Control Ordinance cannot be ensured without providing for additional enforcement mechanisms after project approval and at the time of construction. Therefore, the proposed project could increase the amount of light and glare generated on-site, which could be visible from the surrounding residential neighborhoods and roadways in the project vicinity, including contributions to nighttime sky glow that deteriorate the "dark sky" setting of the site and surrounding environs.

Based on the above, the proposed project could be considered to create a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.1-3 *In conjunction with submittal of final project improvement plans, the developer shall submit a lighting plan for the review and approval of the Chief Building Official and the Community Development Director of the City of Davis. The lighting plan shall address limiting light trespass and glare on the project site, including any lighting for fields and courts at the proposed community park, through the use of shielding and directional lighting methods, which may include, but is not limited to, fixture location and height. The lighting plan shall comply with Chapter 6 of the Davis Municipal Code- Article VIII: Outdoor Lighting Control.*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also have localized aesthetic impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

Two types of aesthetic impacts may be additive in nature and thus cumulative: night sky lighting, and overall changes in the visual environment as the result of increasing urbanization of large

areas. As development in one area increases and possibly expands over time and meets or connects with development in an adjoining exurban area, the effect of night sky lighting experienced outside of the region may increase in the form of larger and/or more intense nighttime glow in the viewshed.

Similarly, as development in one area changes from rural to urban, and this pattern continues to occur throughout the undeveloped areas of a jurisdiction, the changes in visual character may become additive and cumulatively considerable. The incremental contribution to night sky lighting and changes in visual character by the proposed project are addressed below.

The cumulative setting for impacts related to aesthetics encompasses development of the proposed project in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.1-4 Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout of the City of Davis General Plan. Based on the analysis below, the project's incremental contribution to the significant cumulative impact is *cumulatively considerable* and *significant and unavoidable*.

Due to the location of the project site, the geographic setting for analysis of long-term cumulative effects on visual character is cumulative buildout of the project site in conjunction with future buildout of the City's General Plan and reasonably foreseeable development along the East Covell Boulevard corridor. Other planned development projects in the cumulative setting for the proposed project include the Village Farms Davis Project, the Davis Innovation Sustainability Campus (DiSC) 2022 Project, and the approved Palomino Place Project. The sites of the DiSC 2022 and Village Farms Davis projects are both located on existing agricultural land outside of the City Limits along East Covell Boulevard to the west of the project site, whereas the Palomino Place project site is also west of the project site, but within the City Limits. The DiSC 2022 project site consists of 102 acres (plus the 16.5-acre Mace Triangle property) immediately to the east of Mace Boulevard and north of County Road (CR) 32A, northeast of the City Limits. The Village Farms Davis site is comprised of 497.6 acres to the north of East Covell Boulevard and east of the existing Cannery neighborhood, adjacent to the northern City Limits boundary. The Palomino Place site consists of 25.8 acres on an existing property known as the Wildhorse Ranch and/or Duffel Horse Ranch, and is located west of the project site across the Wildhorse Agricultural Buffer.

The visual resources of the immediate project vicinity are characterized by agricultural lands to the north and east, with urbanized and residential uses to the west and south. As discussed above, due to the location of the project site, the geographic setting for analysis of long-term cumulative effects related to long-term changes in visual character is cumulative buildout of the project site in conjunction with future buildout of the City's General Plan and reasonably foreseeable development along the East Covell Boulevard corridor. In addition to the existing development in the project vicinity, other planned development projects in the cumulative setting for the proposed project

include the Village Farms Davis Project, the DiSC 2022 Project, and the approved Palomino Place Project.

All three areas are separated from the project site by intervening urban and agricultural uses. Development of other approved projects, as well as the project site, would change the existing visual character of those specific locations from vacant or minimally developed land to more intensively developed residential areas. Such projects would be required to comply with applicable City requirements, including the City's Municipal Code, General Plan policies, and development standards set forth by project-specific plans.

Nonetheless, as discussed under Impact 4.1-3, the project site is predominantly undeveloped and affords views from East Covell Boulevard of agricultural landscape, which would be significantly altered following project construction. Therefore, in context with the planned development along East Covell Boulevard in the project vicinity, the project's incremental contribution to the significant impact related to altering the visual character of the surroundings would be ***cumulatively considerable***.

Mitigation Measure(s)

Feasible mitigation does not exist to reduce the above impact to a less-than-significant level. Due to the substantial degradation of the existing visual character and quality of public views of the project site, the impact associated with construction of the proposed project in combination with cumulative development would remain *cumulatively considerable* and *significant and unavoidable*.

4.1-5 Creation of new sources of light or glare associated with development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below and with implementation of mitigation, the incremental contribution of the proposed project to the significant cumulative impact is *less than cumulatively considerable*.

Cumulative effects of lighting are visible over a wide area, due to the potential for lighting from a number of projects to create sky glow. Cumulative development throughout the General Plan planning area, particularly conversion of agricultural or currently vacant sites to urban uses, would increase the sources of light and glare, which would have the potential to contribute to sky glow in the area and result in a significant cumulative impact. Such sources of light would be typical of existing residential development in the project vicinity, such as the residential uses to the west and south of the project site.

However, cumulative development within the General Plan planning area, including the proposed project and future projects with the project vicinity, such as the approved Palomino Place Project, DiSC 2022, and Village Farms Davis, would be subject to existing regulations and guidelines related to light and glare. For example, all projects proposed for construction within the City's General Plan planning area are required to comply with the applicable requirements established in the City's Outdoor Lighting Control Ordinance (set forth by Davis Municipal Code Article 8.17), which provides

standards for outdoor lighting to minimize light pollution, glare, and light trespass. Projects within the cumulative setting would also be subject to General Plan Policy UD 3.2, ensuring shielding fixtures are installed in such a manner as to prevent direct rays from passing property lines or into the public right-of-way. Thus, compliance with the foregoing requirements would ensure that buildout of the City's planning area, as well as present and future probable projects, would not create new sources of substantial light or glare.

Additionally, as discussed under Impact 4.1-4, to ensure the proposed project complies with General Plan Policy UD 3.2 and the City's Outdoor Lighting Control Ordinance, Mitigation Measure 4.1-4 of this EIR requires the developer to prepare a lighting plan, which would be subject to review and approval by the Chief Building Official and the Community Development Director and would address limiting light trespass and glare on the project site through the use of shielding and directional lighting methods.

Based on the above, development of the proposed project, in conjunction with buildout of the Davis General Plan planning area and present and probable future projects, would be subject to the applicable requirements of the General Plan Policy UD 3.2 and the City's Outdoor Lighting Control Ordinance. However, without the implementation of Mitigation Measures 4.1-4 at the time of construction, the proposed project could create a new source of substantial light or glare that would adversely affect day or nighttime views in the cumulative setting, and the contribution of the proposed project to the cumulative significant impact could be ***cumulatively considerable***.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the contribution of the proposed project to the significant cumulative impact to a *less than cumulatively considerable* level.

4.1-5 Implement Mitigation Measure 4.1-3.

4.2. Agricultural Resources

4.2 AGRICULTURAL RESOURCES

4.2.1 INTRODUCTION

The Agricultural Resources chapter of the EIR describes the status of the existing agricultural resources within the boundaries of the project site, using current State data, including identification of any Prime Farmland, Unique Farmland or Farmland of Statewide Importance. In addition, potential conflicts with existing zoning for agricultural use or right-to-farm ordinances applicable to the proposed project are identified, as well as Williamson Act contracts. The chapter also focuses on the agricultural resources present on-site and addresses the potential for development of the proposed project to result in the loss of agricultural land or conversion of agricultural land to non-agricultural uses. Documents referenced to prepare this chapter primarily include the City of Davis General Plan[1] and the City of Davis General Plan EIR.[2] Further information was obtained from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey[3] and the California Important Farmland Finder.[4]

Information regarding forestry resources is included in Chapter 5, Effects Not Found to be Significant, of this EIR.

4.2.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section describes current farmland and soil productivity classification systems, as well as the extent and quality of the agricultural resources present on the project site.

Existing Agricultural Operations

The project site consists of generally flat land currently used for agricultural activities. Frequently grown crops include, but are not limited to, hay, sunflowers, and tomatoes. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. Aerial imagery indicates crops have been cultivated on the site for at least the past thirty-five years. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately 5 to 15 feet of Channel A. In the northwestern portion of the project site, an existing road crossing allows agricultural operations to continue from Channel A to the northern boundary of the project site. The project site is bounded by the Wildhorse Agricultural Buffer to the west, the majority of which is approximately 200 feet wide, and agricultural land to the north and east.

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1 City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.
2 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School.* Certified May 2001.
3 U.S. Department of Agriculture, National Resources Conservation Service. *Web Soil Survey*. Available at: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed May 2025.
4 California Department of Conservation. *California Important Farmland Finder*. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed May 2025.

Farmland Classifications

The Farmland Mapping and Monitoring Program (FMMP), part of the Division of Land Resource Protection, California Department of Conservation (DOC), uses soil agricultural productivity information from the NRCS to create maps illustrating the types of farmland in a particular area.

The FMMP was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the USDA. The intent of the USDA was to produce agriculture maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the USDA developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland maps are derived from the USDA soil survey maps using the LIM criteria.

Since 1980, the State of California has assisted the USDA with completing the mapping in the State. The FMMP was created within the California DOC to carry on the mapping activity on a continuing basis, and with a greater level of detail. The California DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California use the Land Capability Classification and Storie Index Rating systems, but also consider physical conditions such as dependable water supply for agricultural production, soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth.

The California DOC classifies lands into seven categories: Prime Farmland, Farmland of Statewide Importance (Statewide Farmland), Unique Farmland, Farmland of Local Importance (Local Farmland), Grazing Land, Urban and Built-up Land (Urban Land), and Other Land. The first three types listed above are collectively designated by the State as Agricultural Land for the purposes of CEQA (see Public Resources Code [PRC] Section 21060.1). Important Farmland maps for California are compiled using the modified LIM criteria and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into surrounding classifications. Each of the seven categories are summarized below, based on California DOC's A Guide to the Farmland Mapping and Monitoring Program.[5]

Prime Farmland

Prime Farmland is land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. The land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles (a cycle is equivalent to two years) prior to the mapping date.

Farmland of Statewide Importance

Farmland of Statewide Importance is land similar to Prime Farmland, but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.

[5] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. *A Guide to the Farmland Mapping and Monitoring Program*. 2004.

Unique Farmland

Unique Farmland is land of lesser quality soils used for the production of the State's leading agricultural crops. The land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date.

Farmland of Local Importance

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's Board of Supervisors and a local advisory committee. Farmland of Local Importance includes lands which do not qualify for Prime, Statewide, or Unique designation, but are currently irrigated crops, pasture, or non-irrigated crops; lands that would meet the Prime or Statewide designation and have been improved for irrigation, but are now idle; and lands that currently support confined livestock, poultry operations, and aquaculture.

Farmland of Local Potential

Farmland of Local Potential is a subcategory of Farmland of Local Importance and is usually aggregated within the Farmland of Local Importance acreage in land use conversion tables. Four counties, including Yolo County, maintain definitions of Farmland of Local Potential. For Yolo County, Farmland of Local Potential is defined as Prime or Statewide soils which are not presently irrigated or cultivated.

Grazing Land

Grazing Land is land on which the existing vegetation, whether grown naturally or through management, is suited to the grazing of livestock. The minimum mapping unit for the Grazing Land category is 40 acres.

Urban and Built-up Land

Urban and Built-up Land is occupied with structures with a building density of at least one unit to one-half acre. Uses may include but are not limited to, residential, industrial, commercial, construction, institutional, public administration purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as part of this unit, if they are part of a surrounding urban area.

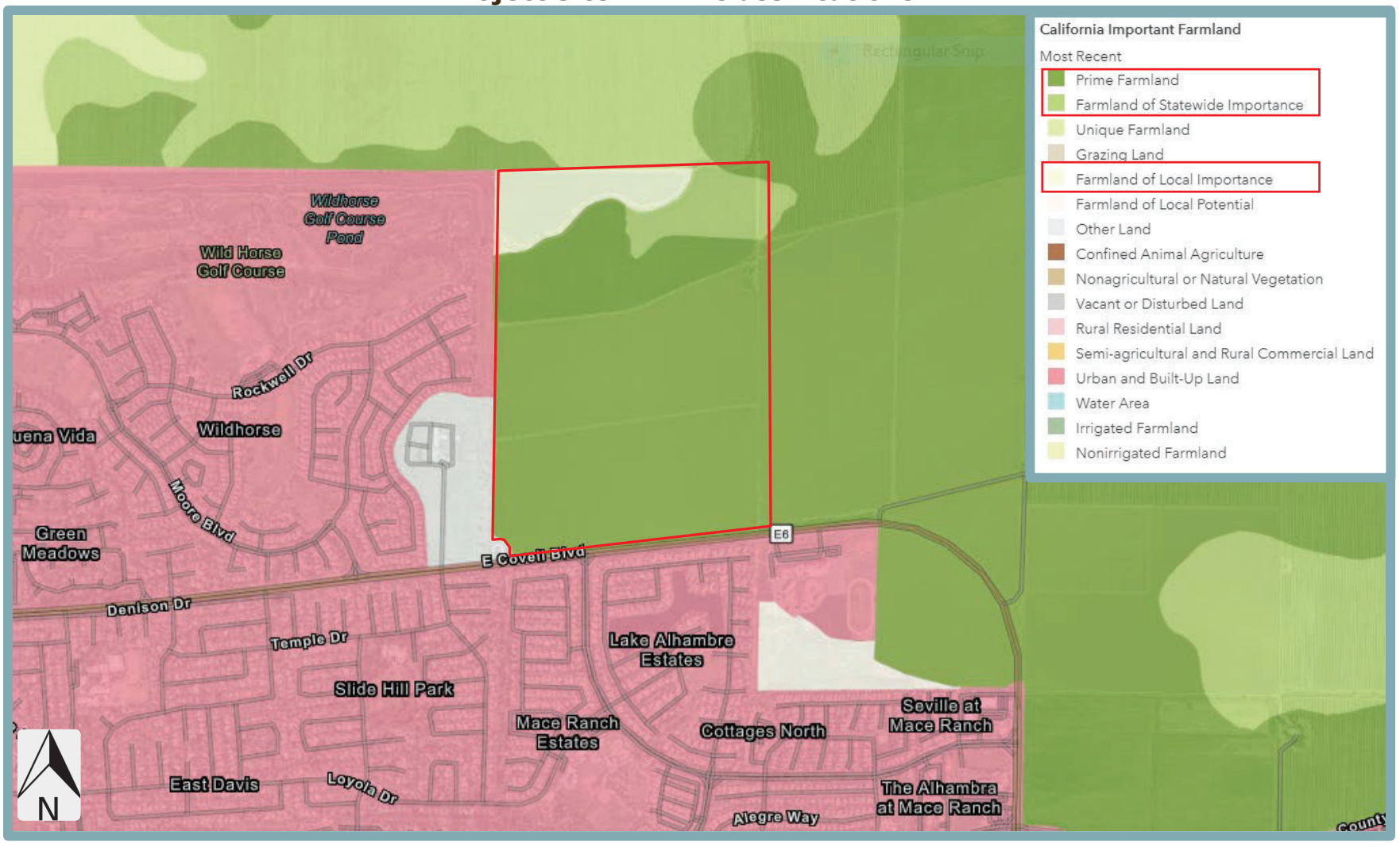
Other Land

Other Land is land that is not included in any other mapping categories. The following uses are generally included: rural development, brush timber, government land, strip mines, borrow pits, and a variety of other rural land uses.

Project Site Farmland Classifications

According to the FMMP, the project site contains Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance throughout the site (see Figure 4.2-1). The specific acreages are summarized in Table 4.2-1.

Figure 4.2-1
Project Site FMMP Classifications



Note: Site boundaries are approximate.
Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2025.

*Figure not OCR compatible.

Table 4.2-1 FMMP Classifications	
On-Site	
FMMP Classification	**Acreage**
Prime Farmland	192.7
Farmland of Statewide Importance	22.5
Farmland of Local Importance	16.7
Total:	**232**
Note: Acreages have been rounded to the nearest approximate acre.	

Agricultural Productivity of Soils

The USDA NRCS uses two systems to determine a soil's agricultural productivity: the Land Capability Classification System and the Storie Index Rating System. The "prime" soil classification of both systems indicates the presence of few to zero soil limitations, which, if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production.

The Land Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Generally, as the rating of the capability classification system increases, yields and profits are more difficult to obtain. A general description of soil classification, as defined by the NRCS, is provided in Table 4.2-2.

The Storie Index Rating system ranks soil characteristics according to suitability for agriculture from Grade 1 soils (80 to 100 rating), which have few or zero limitations for agricultural production, to Grade 6 soils (less than 10 rating), which are not suitable for agriculture. Under the Storie Index Rating system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. Unlike the Land Capability Classification outlined above, the Storie Index Rating System does not distinguish between irrigated and non-irrigated soils.

The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 4.2-3. Table 4.2-4 below summarizes the existing on-site soil types along with the Land Capability Classification and Storie Index Rating for each soil type. The locations of the soil types are shown in Figure 4.2-2.

As shown in Table 4.2-4, according to the USDA NRCS Web Soil Survey conducted for the project site, the majority of soils within the site have an Irrigated Land Capability Classification of Class I. Class I soils are defined as having slight limitations that restrict their use.

The Storie Index Ratings of the on-site soils are either Grade 1 – Excellent, Grade 2 – Good, or Grade 4 – Poor. Grade 1 soils have few limitations to restrict soil use for crops, while Grade 2 soils are suitable for most crops, but have minor limitations that narrow crop choice. Grade 4 soils have severe limitations and require special management if used for crops.

Table 4.2-2
Land Capability Classification

Class	Definition
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.
III	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove that limit their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife habitat, or water supply or to aesthetic purposes.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service. National Soil Survey Handbook, Part 622.2(E). Amended August 2024.

Table 4.2-3
Storie Index Rating System

Grade	Index Rating	Definition
1 – Excellent	81 through 100	Few limitations that restrict their use for crops
2 – Good	61 through 80	Suitable for most crops, but have minor limitations that narrow the choice of crops and have a few special management needs
3 – Fair	41 through 60	Suited to a few crops, or special crops, and require special management
4 – Poor	21 through 40	If used for crops, severely limited and require special management
5 – Very Poor	11 through 20	Not suited for cultivated crops, but can be used for pasture/range
6 – Non-Agriculture	Less than 10	Soil and land types generally not suited to farming

Source: U.S. Department of Agriculture, Web Soil Survey, 2025.

Williamson Act Contracts

According to the California Department of Conservation Williamson Act Enrollment Finder, the project site is not under a Williamson Act contract.[6]

[6] California Department of Conservation. *California Williamson Act Enrollment Finder*. Available at: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html. Accessed April 2025.

Figure 4.2-2
Project Site Soil Types



Source: Helix Environmental Planning, 2024.

Table 4.2-4
Properties of On-Site Soils

Soil Type	Irrigated Land Capability Classification	Storie Index Rating
Marvin silty clay loam	Class II	Grade 2 – Good
Merritt complex, saline-alkali	Class IV	Grade 4 – Poor
Reiff gravelly loam	Class II	Grade 1 – Excellent
Sycamore silt loam, drained, 0 percent slopes, MLRA 17	Class I	Grade 2 – Good
Sycamore silty clay loam, drained, 0 percent slopes, MLRA 17	Class I	Grade 2 – Good
Sycamore complex, drained	Class I	Grade 2 – Good
Tyndall very fine sandy loam, drained	Class I	Grade 2 – Good
Yolo silt loam, 0 to 2 percent slopes, MLRA 17	Class I	Grade 1 – Excellent

Source: U.S. Department of Agriculture, National Resources Conservation Service, Web Soil Survey Database, 2025.

4.2.3 REGULATORY CONTEXT

Federal laws or regulations pertaining to agricultural resources are not applicable for this analysis. The existing State and local laws and regulations pertaining to such resources are listed below, as applicable.

State Regulations

The following are applicable State regulations related to agricultural resources.

Williamson Act

The California Land Conservation Act, better known as the Williamson Act, has been the State's premier agricultural land protection program since the Act's enactment in 1965. The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Williamson Act creates an arrangement whereby private landowners enter into contractual agreements with counties and cities to voluntarily restrict land to agricultural and open space uses. The vehicle for such agreements is a rolling-term, 10-year contract (i.e., unless either party files a "notice of non-renewal," the contract is automatically renewed annually for an additional year). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 – Prime Agricultural Definition

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) establishes procedures for local government changes of organization, including City incorporations, annexations to a City or special district, and City and special district consolidations. Local Agency Formation Commissions (LAFCo) have numerous powers under the CKH Act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. According to Section 56064 of the CKH Act, prime agricultural land means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets five specific

qualifications discussed further below. The project site is subject to Section 56064 of the CKH Act.

In compliance with Government Code Section 56064, "prime agricultural land" is defined as an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and which meets any of the following qualifications:

(a) Land that qualifies, if irrigated, for rating as Class I or Class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is currently irrigated, provided that irrigation is feasible.
(b) Land that qualifies for rating 80 – 100 Storie Index rating.
(c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
(d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.
(e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred ($400) per acre for three of the previous five calendar years.

Department of Pesticide Regulation

Certain pesticides can be especially dangerous to human health or the environment if used incorrectly. Therefore, California law allows the Department of Pesticide Regulation (DPR) to put special controls on these pesticides, called "restricted materials." Restricted materials are limited in their use to trained individuals, and then further restricted to times and places approved by the County Agricultural Commissioners. The commissioners evaluate the potential effects an application might have on people and the environment before the pesticide is used.

The purchase or use of most restricted materials in agriculture requires a permit from the County Agricultural Commissioner. Permits are also required to use pesticides for commodity treatment in fumigation chambers at ports and elsewhere. The major exception to the permit requirement is structural pest control (e.g., pesticide use to get rid of a termite infestation).

California is the only state with such a pesticide permitting system. Similar to other states, users of restricted materials must have certain training, but only California requires users of certain pesticides to get a permit from a local regulatory official. County Agricultural Commissioners, with their extensive knowledge of both pesticides and local conditions, are uniquely positioned to grant such permits. In addition, requiring a permit allows the commissioners to ensure that users of restricted materials prevent harmful effects or use alternatives to the pesticide.

SprayDays California

In March 2025, the DPR launched SprayDays California, a Statewide system designed to provide transparent, accessible, and timely notifications and information about the use of restricted material pesticides. SprayDays California provides information online and through email and text message notifications, 48 hours before the intended use of soil fumigants, a type of restricted material pesticide, and 24 hours before the intended use of other restricted material pesticides used on farms. Website visitors can search for scheduled applications anonymously using a map or enter any California postal address to view applications planned within a one-square-mile area.

Users can also opt-in to notifications about scheduled applications near a specified address using a phone number or email address.

Local Regulations

The following are the local regulations and standards relevant to agricultural resources.

Yolo Local Agency Formation Commission

The Yolo LAFCo is a State-mandated boundary commission responsible for coordinating logical and timely changes in local government boundaries. In consideration of annexation proposals, Yolo LAFCo observes four basic statutory purposes: 1) the discouragement of urban sprawl; 2) the preservation of open space and agricultural land resources; 3) the efficient provision of government services; and 4) the encouragement of orderly growth boundaries based upon local conditions and circumstances. Yolo LAFCo's powers, procedures, and functions are set forth in the CKH Act.

California Government Code Section 56377 mandates that all LAFCos consider the following factors during review of projects that could reasonably be expected to convert existing open-space lands to uses other than open-space uses:

- Development of land for other than open-space uses shall be guided away from existing prime agricultural lands toward areas containing non-prime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area; and
- Development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the Sphere of Influence of a local agency should be encouraged before any proposal is approved that would allow or lead to the development of existing open-space lands for non-open-space uses outside the existing jurisdiction or sphere of influence of the local agency.

LAFCo Agricultural Conservation Policy

The Yolo LAFCo Agricultural Conservation Policy includes six criteria against which all development proposals are reviewed.[7] The criteria emphasize that, where feasible, non-prime land should be annexed before prime land, and require that a parcel's current zoning, pre-zoning, or land use designations are considered in determining whether mitigation should be required for the loss of agricultural land. LAFCo policies are a major protection for the County's agricultural lands, and enforce the preservation of agricultural lands to the greatest extent feasible.

Yolo LAFCo has adopted specific standards to ensure that fair and consistent decisions are rendered in accordance with State law. The following are the adopted policies and standards from Yolo LAFCo's Agricultural Conservation Policy that are relevant to the proposed project.

> **4.3 Agricultural Policy Statement**
> Agriculture is a vital and essential part of the Yolo County economy and environment. Agriculture shapes the way Yolo County residents and visitors view themselves and the quality of their lives. Accordingly, boundary changes for urban development should only be proposed, evaluated, and approved in a manner which, to the fullest extent feasible, is consistent with the continuing growth and vitality of agriculture within the county.

[7] Yolo Local Agency Formation Commission. *Yolo LAFCo Policies & Procedures.* Available at: https://www.yololafco.org/yolo-lafco-policies-procedures. Accessed May 2025.

4.4 Review Criteria
To promote the policy statement, proposals shall be reviewed based on the following considerations:

a) Existing developed areas should be maintained and renewed;
b) Vacant land within developed areas should be developed before agricultural land is annexed for non-agricultural purposes;
c) Land substantially surrounded by existing agency boundaries should be annexed before other lands;
d) Urban development should be restricted in agricultural areas. For example, agricultural land should not be annexed for non-agricultural purposes when feasible alternatives exist;
e) The continued productivity and viability of agricultural land surrounding existing communities should be promoted, by preventing the premature conversion of agricultural land to other uses and, to the extent feasible, minimizing conflicts between agricultural and other land uses;
f) Development near agricultural land should not adversely affect the economic viability or constrain the lawful, responsible practices of the agricultural operations;
g) Where feasible, non-prime land should be annexed before prime land; and
h) A land's current zoning, pre-zoning, or land use designation is one of the factors the Commission will consider in determining whether mitigation will be required for the loss of agricultural land. A land's zoning, pre-zoning, or land use designation in the city's or County's general plan does not automatically exempt it from mitigation.

4.6 Standards for Annexations Involving Prime Agricultural Land
Annexation of prime agricultural lands shall not be approved unless the following factors have been considered:

a) There is insufficient marketable, viable, less prime land available in the subject jurisdiction for the proposed land use;
b) The adoption and implementation of effective measures to mitigate the loss of agricultural lands, and to preserve adjoining lands for agricultural use to prevent their premature conversion to other uses. Such measures may include, but need not be limited to: the acquisition and dedication of farmland, development rights, open space and conservation easements to permanently protect adjacent and other agricultural lands within the county; participation in other development programs (such as transfer or purchase of development rights); payments to responsible, recognized government and non-profit organizations for such purposes; the establishment of open space and similar buffers to shield agricultural operations from the effects of development; and
c) Less prime agricultural land generally should be annexed and developed before prime land is considered for boundary changes. The relative importance of different parcels of prime agricultural land shall be evaluated based upon the following (in a descending order of importance):
    i. Soil classification, with Class I or II soil receiving the most significance, followed by the Revised Storie Index Rating.
    ii. The land's economic viability for continued agricultural use.

4.8 Change of Organization/Reorganization Resulting in Conversion of Prime Agricultural Land
LAFCo will approve a change of organization which will result in the conversion of prime agricultural land or open space use to other uses only if the Commission finds that the proposal will lead to planned, orderly, and efficient development. The following factors shall be considered:

a) Contiguity of the subject land to developed urban areas;
b) Receipt of all other discretionary approvals for changes of boundary, such as prezoning, environmental review, and service plans as required by the Executive Officer before action by the Commission. If not feasible before the Commission acts, the proposal can be made contingent upon receipt of such discretionary approvals within not more than one (1) year following LAFCo action;
c) Consistency with existing planning documents of the affected local agencies, including a service plan of the annexing agency or affected agencies;
d) Likelihood that all or a substantial portion of the subject land will develop within a reasonable period of time for the project's size and complexity;
e) The availability of less prime land within the sphere of influence of the annexing agency that can be developed, and is planned and accessible, for the same or a substantially similar use; and
f) The proposal's effect on the physical and economic viability of other agricultural operations. In making this determination, LAFCo will consider the following factors:
    i. The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region;
    ii. The existing use of the subject and adjacent areas;
    iii. Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of adjacent or nearby agricultural land, or will be extended through or adjacent to, any other agricultural lands which lie between the project site and existing facilities;
    iv. Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural land from the effects of the proposed development;
    v. Provisions of the General Plan's open space and land use elements, applicable growth management policies, or other statutory provisions designed to protect agriculture. Such provisions may include, but not be limited to, designating land for agriculture or other open space uses on that jurisdiction's general plan, adopted growth management plan, or applicable specific plan; adopting an agricultural element to its general plan; and acquiring conservation easements on prime agricultural land to permanently protect the agricultural uses of the property; and
    vi. The establishment of measures to ensure that the new property owners shall recognize the rights of adjacent property owners conducting agricultural operations and practices in compliance with the agricultural zone in accordance with the Right to Farm Ordinance adopted by the Yolo County Board of Supervisors.

4.9 Agricultural Mitigation

Except as expressly noted in sections 4.13 and 4.14 below, annexation of prime agricultural lands shall not be approved unless one of the following mitigations has been instituted, at not less than a 1:1 replacement ratio:

a) The acquisition and dedication of farmland, development rights, and agricultural conservation easements to permanently protect adjacent and other agricultural lands within the County.
b) The payment of fees that is sufficient to fully fund the acquisition and maintenance of such farmland, development rights or easements. The per acre fees shall be specified by a Fee Schedule or Methodology, noted in Section 4.15, which may be periodically updated at the discretion of the Commission.
c) Any such measures must preserve prime agricultural property of reasonably equivalent quality and character that would otherwise be threatened, in the reasonably foreseeable future, by development and/or other urban uses.

The loss of fewer than twenty (20) acres of prime agricultural land generally shall be mitigated by the payment of in lieu fees as mitigation rather than the dedication of agricultural conservation easements. The loss of twenty (20) acres or more of prime agricultural land generally may be mitigated either with the payment of in lieu fees or the dedication of agricultural conservation easements. In all cases, the Commission reserves the right to review such mitigation on a case-by-case basis.

4.10 Agricultural Easement Requirements

If an applicant provides agricultural easements to satisfy this requirement, the easements must conform to the following characteristics:

a) The land used to mitigate the loss of prime agricultural land must also be prime agricultural land as defined in this Policy and the CKH Act.
b) In addition, it must also be of reasonably equivalent quality and character as the mitigated land as measured using both of the following methodologies:
    i. Average Storie Index – The USDA calculation methodology will be used to calculate the average Storie Index or Revised Storie Index score. The mitigating land's average Index score shall be no more than 10% less than the mitigated land's average Index score. The decision of whether to use the Storie Index or Revised Storie Index is within LAFCo's sole discretion.
    ii. Land Equivalency and Site Assessment ("LESA") Model – The LESA calculation shall be in accordance with the methodology adopted by this Commission (see appendices). The mitigating land's LESA score shall be no more than 10% below the mitigated land's LESA score.
c) As a general rule, the Commission will not accept, as mitigation required by this Policy, an agricultural conservation easement or property that is "stacked" or otherwise combined with easements or property acquired for habitat conservation purposes, nor for any other purposes that are incompatible with the maintenance and preservation of economically sound and viable agricultural activities and operations. The Commission retains the discretion to make exceptions on a case-by-case basis, based upon whether the applicant made a good-faith effort to mitigate separately for the loss of habitat in accordance with the Yolo Natural Heritage Program process but such efforts were infeasible, and whether the proposed "stacked" mitigation for the loss of prime agricultural land and habitat involves one of the following, whichever results in the greatest acreage of preserved land:
    i. Mitigation at a ratio of no less than 2:1 for the loss of prime agricultural soils; or
    ii. Mitigation at a ratio of no less than 1:1 for the loss of all agricultural lands in the proposal area; or
    iii. The property subject to the agricultural conservation easement is larger than the proposal area, meets the conditions specified in this Policy, and encompasses a complete field, legal parcel, or farm line.
d) The presence of a home on land that is subject to an agricultural conservation easement is generally incompatible with the maintenance and preservation of economically sound and viable agricultural activities and operations on that land. The presence or introduction of a home may diminish the value of the agriculture conservation easement as mitigation for the loss of prime agricultural land. Consequently, an agricultural conservation easement will generally not be accepted as mitigation for the loss of prime agricultural land if the easement permits the presence of a home, except an existing home that has been present on the proposed easement for at least twenty-five (25) years, or construction of a comparable replacement for such a home. Exceptions to this section of the Policy may be granted by the Commission on a case-by-case basis if the home site is less than two acres and if the applicant can provide sufficient evidence that a

home site on the agriculture conservation easement is necessary to further the goals of maintaining and preserving economically sound and viable agricultural activities and operations on that easement.

4.11 Easement Holder
LAFCo favors the use of a local non-profit agricultural conservation entity or the regional branch of a nationally recognized non-profit agricultural conservation entity as the easement holder. The Commission will use the following criteria when approving the non-profit agricultural conservation entity for these purposes:

a) Whether the entity is a non-profit organization that is either based locally or is a regional branch of a national non-profit organization whose principal purpose is holding and administering agricultural conservation easements for the purposes of conserving and maintaining lands in agricultural production;
b) Whether the entity has a long-term proven and established record for holding and administering easements for the purposes of conserving and maintaining lands in agricultural production;
c) Whether the entity has a history of holding and administering easements in Yolo County for the foregoing purposes;
d) Whether the entity has adopted the Land Trust Alliance's "Standards and Practices" and is operating in compliance with those Standards; and
e) Any other information that the Commission finds relevant under the circumstances.

A local public agency may be an easement co-holder if that agency was the lead agency during the environmental review process. LAFCo also favors that applicants transfer the easement rights or in lieu fees directly to the recognized non-profit agricultural conservation entity in accordance with that entity's procedures. The Commission retains the discretion to determine whether the agricultural conservation entity identified by the applicant and the local lead agency has met the criteria delineated above.

4.12 Agricultural Mitigation Imposed by Other Agencies
The Commission prefers that mitigation measures consistent with this Policy be in place at the time that a proposal is filed with the Commission. The loss of prime agricultural land may be mitigated before Commission action by the annexing city, or the County of Yolo in the case of a district annexation, provided that such mitigation is consistent with this Policy. LAFCo will use the following criteria in evaluating such mitigation:

a) Whether the loss of prime agricultural land was identified during the project's or proposal's review process, including but not necessarily limited to review pursuant to the California Environmental Quality Act;
b) Whether the approval of the environmental documents included a legally binding and enforceable requirement that the applicant mitigate the loss of prime agricultural land in a manner consistent with this Policy; and
c) Whether, as part of the LAFCo application, an adopted ordinance or resolution was submitted confirming that mitigation has occurred, or requiring the applicant to have the mitigation measure in place before the issuance of a grading permit, a building permit or final map approval for the site.

4.15 Agricultural Conservation Policy Payment In Lieu Fee Methodology
In lieu of the dedication of agricultural conservation easements that would otherwise be required by the Agricultural Conservation Policy, the Commission may permit the payment of fees as set forth in this Schedule to fully fund the acquisition and maintenance of farmland, development rights or agricultural conservation easements.

No less than 35% of the average per acre price for full and unencumbered fee title price in the last five (5) unimproved land purchases plus a five percent (5%) endowment of the cost of the easement, and the payment of the estimated transaction costs associated with acquiring an easement. The purchases must be within the general vicinity of the annexing entity and of a size equal to or greater than the total acreage of prime soils within the subject territory.

Payment of the In Lieu Fee is to be made directly to an agricultural conservation entity that meets the criteria set forth in Section 4.10 of this Policy. The agricultural conservation entity receiving these funds must present to the Commission a letter stating its intention to use these funds for the acquisition of farmland, development rights or agricultural conservation easements in Yolo County whose prime soils are reasonably equivalent to the proposal area's soils and that the location of the easements will be within the general vicinity of the annexing entity and in an area within the County of Yolo that would otherwise be threatened, in the reasonably foreseeable future, by development and/or other urban uses.

Yolo County Code

Title 8, Land Development and Zoning, of the Yolo County Code contains the County's primary land development regulations. Yolo County Code Section 8-2.404, Agricultural Conservation and Mitigation Program, includes definitions, policies, and mitigation standards designed to permanently protect agricultural land located within the unincorporated areas of Yolo County. The following requirements apply to agricultural land.

Section 8-2.404(c) Mitigation requirements.

(1) Agricultural mitigation shall be required for conversion or change from agricultural use to a predominantly non-agricultural use prior to, or concurrent with, approval of a zone change from agricultural to urban zoning, permit, or other discretionary or ministerial approval by the County.

Except as provided in subsection (d)(2) below, relating to adjustment factors, for projects that convert prime farmland, a minimum of three (3) acres of agricultural land shall be preserved in the locations specified in subsection (d)(1) for each acre of agricultural land changed to a predominantly non-agricultural use or zoning classification (3:1 ratio). For projects that convert non-prime farmland, a minimum of two (2) acres of agricultural land shall be preserved in the locations specified in subsection (d)(1) for each acre of land changed to a predominantly non-agricultural use or zoning classification (2:1) ratio. Projects that convert a mix of prime and non-prime lands shall mitigate at a blended ratio that reflects for the percentage mix of converted prime and non-prime lands within project site boundaries.

(2) The following uses and activities shall be exempt from, and are not covered by, the Agricultural Conservation and Mitigation Program:

(i) Affordable housing projects, where a majority of the units are affordable to very low or low income households, as defined in Title 8, Chapter 8 of the Yolo County Code (Inclusionary Housing Requirements);

(ii) Public uses such as parks, schools, cultural institutions, and other public agency facilities and infrastructure that do not generate revenue. The applicability of this exemption to public facilities and infrastructure that generate revenue shall be evaluated by the approving authority on a case-by-case basis. The approving authority may partly or entirely deny the exemption if the approving authority determines the additional cost of complying with this program does not jeopardize project feasibility and no other circumstances warrant application of the exemption;

(iii) Gravel mining projects regulated under Title 10, Chapters 3-5 of the Yolo County Code, pending completion of a comprehensive update of the gravel mining program (anticipated in January 2017); and

(iv) Projects covered by an approved specific plan which includes an agricultural mitigation program.

(3) Applications deemed complete prior to the effective date of the ordinance shall provide mitigation at a 1:1 ratio in compliance with all other requirements of this Agricultural Conservation and Mitigation Program.

Section 8-2.404(d) Agricultural Mitigation Implementation.
Agricultural mitigation required by this section shall be implemented as follows:

(1) Location, Generally. Mitigation lands shall be located within two (2) miles of sphere of influence of a city or within two (2) miles of the General Plan urban growth boundary of the town of Esparto ("Esparto Urban Growth Boundary"). Mitigation may also occur in any other area designated by the Board of Supervisors based on substantial evidence demonstrating that the parcel at issue consists predominantly of prime farmland and/or is subject to conversion to non-agricultural use in the foreseeable future. Any such designation shall be made by resolution and shall specify whether the designated area is a priority conservation area subject to a 1:1 mitigation ratio. For all other designated areas, the resolution shall specify the mitigation ratio for any mitigation occurring in the covered area, which may exceed the applicable base ratio.

(2) Adjustment Factors. The following adjustment factors shall be applied, where relevant, to modify the base ratio:

(i) Priority Conservation Areas. Mitigation occurring within a priority conservation area shall occur at a reduced 1:1 ratio unless otherwise specified below. The following areas shall be deemed priority conservation areas for purposes of this section:

(A) Parcels partly or entirely within one-quarter (0.25) mile of the sphere of influence of a city or the Esparto Urban Growth Boundary, or, for projects that convert primarily non-prime farmland, one (1) mile of the sphere of influence of a city or the Esparto Urban Growth Boundary. For the purposes of this subsection, the word "primarily" shall mean greater than fifty (50) percent.

(B) Parcels lying partly or entirely within the area bounded by County Roads 98 and 102 on the west and east, respectively, and by County Roads 29 and 27 on the north and south, respectively. For mitigation of impacts to prime farmland, the ratio shall be 2:1 within this area.

(3) Other Factors.

(i) If the area to be converted is twenty (20) acres or more in size, subject to the exception in (iii), below, by granting, in perpetuity, a farmland conservation easement to a qualifying entity with the County as a third party beneficiary, together with the provision of funds sufficient to compensate for all administrative costs incurred by the qualifying entity and the County as well as funds needed to establish an endowment to provide for monitoring, enforcement, and all other services necessary to ensure that the

conservation purposes of the easement or other restriction are maintained in perpetuity.

(ii) If the area to be converted is a small project less than twenty (20) acres in size, by granting a farmland conservation easement as described in subsection (i), above, or payment of the in-lieu fee established by the County to purchase a farmland conservation easement consistent with the provisions of this section; and the payment of fees in an amount established by the County to compensate for all administrative costs incurred by the County inclusive of endowment funds for the purposes set forth in subsection (i), above. The in-lieu fee, paid to the County, shall be used for agricultural mitigation purposes only (i.e. purchases of conservation easements and related transaction and administrative costs).

(iii) If Yolo County or a qualifying entity establishes a local farmland mitigation bank and sufficient credits are available at a total cost not exceeding the in lieu fee (and all related transactional and similar costs), small projects shall satisfy their farmland mitigation requirement by purchasing credits from the mitigation bank in a quantity sufficient to discharge the mitigation obligations of the project under this section. Other local projects converting twenty (20) or more acres of farmland may also purchase credits to discharge their farmland mitigation requirements, in lieu of providing an easement under subsection (i), above.

A farmland mitigation bank must be approved by the Board of Supervisors for local (i.e., within Yolo County) mitigation needs based upon a determination that it satisfies all of the farmland mitigation requirements of this section.

Landowners and project applicants that conserve more farmland than necessary to satisfy their mitigation obligations may seek approval of a farmland mitigation bank through an application process to be developed by the Planning, Public Works, and Environmental Services Department.

(iv) Agricultural mitigation shall be completed as a condition of approval prior to the acceptance of a final parcel or subdivision map, or prior to the issuance of any building permit or other final approval for development projects that do not involve a map.

Section 8-2.404(e) Eligible lands

Land shall meet all of the following criteria in sections (1) through (6), below, to qualify as agricultural mitigation:

(1) Agricultural conservation easements resulting from this program shall be acquired from willing sellers only;
(2) The property is of adequate size, configuration and location to be viable for continued agricultural use;
(3) The equivalent class of soil, based on the revised Storie index or NRCS soil survey maps, for the agricultural mitigation land shall be comparable to, or better than, the land which is converted;
(4) The land shall have an adequate water supply to maintain the purposes of the easement, i.e., to irrigate farmland if the converted farmland is irrigated or capable of irrigation. The water supply shall be sufficient to support ongoing agricultural uses;
(5) The mitigation land shall be located within the County of Yolo in a location identified for mitigation in accordance with this section;

(6) It is the intent of this program to work in a coordinated fashion with the habitat conservation objectives of the Yolo Habitat Conservancy joint powers agency and the developing Habitat Conservation Plan/Natural Communities Conservation Plan. The mitigation land may not overlap with existing habitat conservation easement areas; the intent is to not allow "stacking" of easements, except for habitat conservation easements protecting riparian corridors, raptor nesting habitat, wildlife-friendly hedgerows, or other restored or enhanced habitat areas so long as such areas do not exceed five percent (5%) of the total area of any particular agricultural conservation easement.

Title 10, Environment, of the Yolo County Code contains the County's agricultural regulations. Yolo County Code Section 10-6.102, Property operated farm is not a nuisance, states that agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained on agricultural lands for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall not be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than three years if it was not a nuisance at the time it began.

City of Davis General Plan

The following goals and policies from the City of Davis General Plan related to agricultural resources are applicable to the proposed project.

Land Use and Growth Management Chapter

The following policies are applicable to the Urban Agricultural Transition Area (UATA).

Policy LU N.2 Include the lands in this category within city limits whenever feasible.

Policy LU N.3 Segments can vary in width but to the greatest extent possible, a minimum 150-foot width should be pursued. Wider segments should be pursued when opportunity permits.

Policy LU N.4 Where public access is desired, the width of the buffer must be sufficient to also include a 100-foot wide area where public access is restricted to allow for ground spraying on adjacent agricultural land.

Policy LU N.5 Ideally, wider segments should be located where:

- Willing sellers are available,
- Natural resource protection opportunities exist,
- Open space recreation opportunities exist.

Policy LU N.6 Prime agricultural land should remain in agricultural production in the wider segments of the Urban Agriculture Transition Area.

Agriculture, Soils and Minerals Chapter

Goal AG 1 Maintain agriculture as an important industry around Davis.

Policy AG 1.1 Protect agricultural land from urban development except where the general plan land use map has designated the land for urban uses.

Policy AG 1.2 Promote and enhance local agriculture.

Goal AG 3 Conserve soil resources within the planning area.

Policy AG 3.1 Develop programs to help to conserve soil resources.

City of Davis Municipal Code

The applicable sections of the City of Davis Municipal Code related to agricultural resources are presented below.

Davis Municipal Code Article 40A.01

The City of Davis has adopted a Right-to-Farm Ordinance (Chapter 40A of the Davis Municipal Code), the purpose and policies of which are as follows:

(a) It is a goal of the city general plan to work cooperatively with the counties of Yolo and Solano to preserve agricultural land in the Davis planning area which is not otherwise identified in the general plan as necessary for development. It is the policy of the city to preserve and encourage agricultural land use and operations within the city and Yolo and Solano counties, and to reduce the occurrence of conflicts between agricultural and nonagricultural land uses and to protect the public health. One purpose of this law is to reduce the loss of agricultural resources by limiting the circumstances under which agricultural operations may be deemed a nuisance.
(b) It is also the policy of the city to provide purchasers and tenants of nonagricultural land close to agricultural land or operations with notice about the city's support of the preservation of agricultural lands and operations. An additional purpose of the notification requirement is to promote a good neighbor policy by informing prospective purchasers and tenants of nonagricultural land of the effects associated with living close to agricultural land and operations.
(c) It is further the policy of the city to require all new developments adjacent to agricultural land or operations to provide a buffer to reduce the potential conflicts between agricultural and nonagricultural land uses.
(d) Implementation of these policies can be strengthened by establishing a dispute resolution procedure designed to amicably resolve any complaints about agricultural operations that is less formal and expensive than court proceedings. (Ord. 1823 § 1).

Davis Municipal Code Article 40A.03

The City of Davis has established Farmland Preservation regulations (Chapter 40A of the Davis Municipal Code), the purpose and findings of which are as follows:

(a) The purpose of this chapter and this article is to implement the agricultural land conservation policies contained in the Davis general plan with a program designed to permanently protect agricultural land located within the Davis planning area for agricultural uses.
(b) Since 1995 the city has required agricultural mitigation for development projects that would change the general plan designation or zoning from agricultural land to nonagricultural land and for discretionary land use approvals that would change an agricultural use to a nonagricultural use, and the city council finds that this chapter and this article are necessary for the following reasons: California is losing farmland at a

rapid rate; Yolo and Solano County farmland is of exceptional productive quality; loss of agricultural land is consistently a significant impact under CEQA in development projects; the Davis general plan has policies to preserve farmland; the city is surrounded by farmland; the Yolo and Solano County general plans clearly include policies to preserve farmland; the continuation of agricultural operations preserves the landscape and environmental resources; loss of farmland to development is irreparable and agriculture is an important component of the city's economy; and losing agricultural land will have a cumulatively negative impact on the economy of the city and the counties of Yolo and Solano.

(c) It is the policy of the city to work cooperatively with Yolo and Solano counties to preserve agricultural land within the Davis planning area, as shown in the "planning area" map found in the Davis general plan, beyond that deemed necessary for development. It is further the policy of the city to protect and conserve agricultural land, especially in areas presently farmed or having Class 1, 2, 3, or 4 soils.

(d) The city council finds that some urban uses when contiguous to farmland can affect how an agricultural use can be operated, which can lead to the conversion of agricultural land to urban use.

(e) The city council further finds that by requiring adjacent mitigation for land being converted from an agricultural use and by requiring a one hundred fifty foot buffer, the city shall be helping to ensure prime farmland remains in agricultural use. (Ord. 2300 Section 1, 2007).

In addition, Davis Municipal Code Section 40A.03.025 establishes the City's agricultural land mitigation requirements, as follows:

(a) The city shall require agricultural mitigation as a condition of approval for any development project that would change the general plan designation or zoning from agricultural land to nonagricultural land and for discretionary land use approvals that would change an agricultural use to a nonagricultural use.

(b) The city has determined that effectively locating mitigation lands provides increased protection of agricultural lands threatened with conversion to non-agricultural uses. Requirements and incentives are established in this article to direct mitigation to areas that are under threat of conversion. In recognizing the importance of the location of mitigation, the city has identified two general categories of agricultural mitigation: (1) adjacent mitigation; and (2) remainder mitigation. For every applicable development project, the determination as to whether a combination of adjacent and remainder mitigation shall be required or whether only remainder mitigation shall be required shall be based on site specific factors, as specified in this article. Adjacent mitigation is addressed in Section 40A.03.030; remainder mitigation is addressed in Section 40A.03.035.

(c) Total mitigation for a development project shall not be less than a ratio of two acres of protected agricultural land for each acre converted from agricultural land to nonagricultural land. Location based factors (credits) for remainder mitigation contained in Section 40A.03.035 may result in ratios greater than 2:1.

4.2.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to agricultural resources. A discussion of the project's impacts and mitigation measures where necessary, is presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in any of the following:

- 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 non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]) (see Chapter 5, Effects Not Found to be Significant);
- Result in the loss of forest land or conversion of forest land to non-forest use (see Chapter 5, Effects Not Found to be Significant);
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use (see Chapter 5, Effects Not Found to be Significant).

Issues related to whether the proposed project would result in any of the following impacts are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]);
- Result in the loss of forest land or conversion of forest land to non-forest use; and
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

Method of Analysis

Evaluation of potential impacts of the proposed project on agricultural resources is based on the following: the City's General Plan, the associated EIR, the NRCS Web Soil Survey, and the FMMP online mapping system. Soil data from the FMMP was used to determine the approximate amounts of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance within the project site boundaries. The proposed area of disturbance was overlain on the known on-site agricultural resources to determine the overall impact to agricultural land that would occur during development of the proposed project. The standards of significance listed above are used to delineate the significance of any potential impacts.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.2-1 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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A. Based on the analysis below, even with implementation of mitigation, the impact is *significant and unavoidable.*

For environmental review purposes under CEQA, the categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland constitute "agricultural land." Pursuant to the California DOC Important Farmland Finder, approximately 192.7 acres of the project site are mapped as Prime Farmland (see Figure 4.2-1 and Table 4.2-1). In addition, the project site contains approximately 22.5 acres of Farmland of Statewide Importance, as well as land that is not Farmland. As such, approximately 215.2 acres of Farmland are located on-site, and development of the proposed project would convert approximately 215.2 acres of Farmland to non-agricultural uses.

The City of Davis defines "agricultural land" as "those lands in agricultural use," where "agricultural use" is defined as, "Use of land for the purpose of producing food, fiber, or livestock for commercial purposes." Agricultural lands are also considered throughout Yolo County and/or the City as lands zoned as agricultural preserve (A-P), agricultural exclusive (A-E), or agricultural general (A-I), as well as areas of the City with Class 1, 2, 3, or 4 soils.[8] Davis Municipal Code Section 40A.03.025 states that, "The city shall require agricultural mitigation as a condition of approval for any development project that would change the general plan designation or zoning from agricultural land to nonagricultural land and for discretionary land use approvals that would change an agricultural use to a nonagricultural use."

As shown above in Table 4.2-4, the majority of the project site consists of Class I soils. Because the entire project site is in agricultural use, as defined by the Davis Municipal Code, agricultural mitigation would be required for the full site acreage, with the exception of the proposed 44.3-acre UATA, given that the City's Municipal Code Section 40A.03.030 states "The land included within the agricultural buffer required by Section 40A.01.050(c) shall not be included in the calculation for the purposes of determining the amount of land that is required for mitigation." Thus, a total of approximately 187.9 acres would require agricultural mitigation.

The City's 2:1 agricultural mitigation requirement would satisfy Yolo County's (minimum) agricultural land mitigation ratio requirement, assuming certain criteria specified in County Code Section 8-2.404(d) are met. Similarly, the City's agricultural mitigation requirement would satisfy Yolo LAFCo's agricultural land mitigation ratio requirement.

Conclusion

Based on the above, the proposed project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A. Thus, a ***significant*** impact would occur.

Mitigation Measure(s)

While the following mitigation measure would preserve Farmland acreage elsewhere, that preservation would not create new Farmland. As such, the proposed project would lead to an overall loss of Farmland. Therefore, although implementation of the

[8] While some of the County zoning designations listed herein are now obsolete, the definition of agricultural land is quoted directly from the City of Davis Municipal Code Section 40A.01.020.

following mitigation measure would reduce the above significant impact, the impact would remain *significant and unavoidable.*

4.2-1 Prior to initiation of grading activities for each phase of development, the project applicant shall set aside in perpetuity, active agricultural acreage in an amount consistent with the applicable agricultural mitigation requirements of the appropriate jurisdiction.

The agricultural land shall be secured through the purchase of development rights and execution of an irreversible conservation or agricultural easement, consistent with Section 40A.03.025 of the Davis Municipal Code. The location and amount of active agricultural acreage shall be subject to review and approval by the City of Davis Community Development Department. The amount of agricultural acreage set aside shall account for farmland lost due to the conversion of the project site. Pursuant to Davis Municipal Code Section 40A.03.040, the agricultural mitigation land shall be comparable in soil quality with the agricultural land being changed to nonagricultural use. The easement land must conform with the policies and requirements of Yolo Local Agency Formation Commission (LAFCo), including a Land Evaluation and Site Assessment (LESA) score that is a maximum of 10 percent below that of the project site. The easement instrument used to satisfy this measure shall conform to the conservation easement template of the Yolo Habitat Conservancy or to another conservation easement template acceptable to the City of Davis.

4.2-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract. Based on the analysis below, the impact is *less than significant*.

The project site is not subject to any Williamson Act contracts. With respect to existing zoning, the site is currently zoned Agricultural Intensive (A-N) by Yolo County. However, consistent with the CKH Act, Pre-zoning would be applied to the project site as part of annexation into the City of Davis (see Government Code Section 56375). The project site would be pre-zoned to the City's Planned Development (P-D) zone. As part of approval of the Pre-zoning to P-D, the proposed project would be required to adhere to the development standards included in the Final Planned Development, which would be subject to City approval.

Approval of the proposed project is a discretionary action of the Davis City Council. Should the City Council deny the proposed project, the existing conditions on-site would remain and a conflict with the existing zoning for agricultural use on APN 071-130-007 would not occur. Should the City Council approve the proposed project, the requested Pre-zoning to P-D would be approved concurrently and a conflict with existing zoning for agricultural use would not occur. Potential impacts to Farmland are addressed in Impact 4.2-1 above.

Based on the above, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.2-3 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. Based on the analysis below, the impact is *less than significant.*

Agricultural operations exist within the project vicinity, specifically to the north and east of the project site. The proposed project would include a 44.3-acre buffer between the agricultural land to the north and east and the areas developed as part of the proposed project through inclusion of the UATA in the northernmost and easternmost portion of the site. Davis Municipal Code Section 40A.01.050 requires a minimum 150-foot-wide agricultural buffer, comprised of a 50-foot-wide agricultural transition area and a contiguous 100-foot-wide buffer. The proposed UATA would feature a width of over 150 feet and would not include any uses prohibited by Davis Municipal Code Article 40A.01. Thus, inclusion of the UATA would satisfy the agricultural buffer requirements established by the Davis Municipal Code for existing agricultural operations to the north and east of the project site.

Because existing agricultural operations to the north and east of the project site would continue in perpetuity, pesticides could be sprayed in the near project vicinity. The Yolo County Agricultural Commissioner has established conditions covering the use of restricted materials, the purposes of which are to minimize undue hazards and risks associated with the application and handling of restricted materials.[9] Condition #1 addresses the use of restricted materials in the proximity of environmentally sensitive areas. Examples given for environmentally sensitive areas include residential areas (cities, towns, rural neighborhoods), schools, playgrounds, bus stops (when in use), parks, hospitals, shopping centers, occupied labor camps, organic crops, estuaries, reservoirs, lakes, waterways, livestock, state wildlife management areas, and critical habitats of rare, endangered or threatened species.

According to Condition #1, restricted pesticides shall not be applied in close proximity to environmentally sensitive areas unless the minimum distance between the closest operating nozzle and the sensitive area is maintained. Under the most conservative of conditions, which assumes application of pesticides through use of aircraft, a minimum distance between application area and environmentally sensitive areas is 500 feet. The existing agricultural uses to the north and east of the project site do not currently use aerial application of restricted pesticides due to the proximity of Frances Ellen Watkins Harper Junior High School (Harper Junior High) and the Wildhorse neighborhood. The owner of the existing agricultural land to the east of the project site confirmed that only ground rigs are used for application of pesticides.[10] According to Condition #1, the minimum distance for ground rig application between the closest operating nozzle and the non-target area is 100 feet for “Danger” and 50 feet for “Warning/Caution.”

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9 Yolo County, Yolo County Agricultural Commissioner. *Conditions Covering the Use of Restricted Materials*. January 1, 2014.

10 Moebius, Breann M., Partner, Hefner Law. *Personal Communication [email] with Nick Pappani, Vice President, Raney Planning and Management, Inc*. May 21, 2025.

Within the eastern portion of the UATA, trails are not proposed within 100 feet of the project site boundary. An additional buffer would be located on the adjacent parcel, given that crops are not planted to the property line. With regard to the adjacent farm to the north of the project site, the property owner is already subject to human occupancy restrictions given the existing adjacent uses within the Wildhorse neighborhood. While the proposed trail within the northern portion of the UATA would curve closer to the northern farm, the trail in this area would be separated from potential pesticide spray areas by a small unfarmed piece of the adjacent property and by Channel A, the two of which provide a separation distance greater than 100 feet. Although it cannot be guaranteed that the unfarmed piece would remain unfarmed, , it is reasonable to assume that this area is unlikely to be actively farmed due to its small size and access constraints. The remainder of the trail would be beyond 100 feet from the project site boundary. Thus, the proposed project would be consistent with the minimum distances between pesticide application and environmentally sensitive areas established by the Yolo County Agricultural Commissioner.

Based on the above, the proposed project would each satisfy the agricultural buffer requirements established by the Davis Municipal Code and be consistent with the minimum distances between pesticide application and environmentally sensitive areas established by the Yolo County Agricultural Commissioner. Thus, the proposed project would not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative setting is included in Chapter 6, Statutorily Required Sections, of this EIR.

4.2-4 Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use. Based on the analysis below, even with implementation of mitigation, the contribution of the proposed project to the significant impact would be *cumulatively considerable* and *significant and unavoidable*.

The geographic scope for the cumulative agricultural resources analysis includes development of the proposed project in conjunction with buildout of the City’s General Plan, as well as a list of present and probable future projects. With respect to buildout

of the City's planning area, as discussed under Impact LU-3 in the City's General Plan EIR, the City's requirement that converted agricultural land be mitigated with preservation of existing agricultural land of comparable quality would reduce the severity of effects on existing Farmland. Nonetheless, the General Plan EIR concludes that the impact from converting existing Farmland to urban uses would remain significant and unavoidable.

The following present and probable future projects are located in the project vicinity: Bretton Woods Subdivision, Bretton Woods Activity and Wellness Center, and Bretton Woods Affordable Senior Apartments; Palomino Place; Village Farms Davis; and the Davis Innovation and Sustainability Campus (DiSC) 2022. Of the foregoing projects, Village Farms Davis and DiSC 2022 would result in the conversion of Farmland, as defined by CEQA, to non-agricultural uses. In addition, the Bretton Woods developments resulted in conversion of Farmland of Local Importance to non-agricultural uses. The Bretton Woods developments are currently under construction. Overall, a portion of the foregoing projects would further contribute to the cumulative loss of existing Farmland in and adjacent to the City of Davis.

With respect to the proposed project, as discussed under Impact 4.2-1 above, the project site contains Prime Farmland and Farmland of Statewide Importance. Therefore, the proposed project would convert the aforementioned Farmland types to non-agricultural uses. Although the proposed project would be subject to mitigation measures for the loss of Farmland, the proposed project would still lead to an overall loss of Farmland. It should be noted that the present and probable future projects within the City of Davis would also be subject to agricultural land mitigation requirements established by the appropriate jurisdiction.

Based on the above, development facilitated by buildout of the City's General Plan in conjunction with the proposed project, as well as other present and/or probable future projects, would result in a significant impact related to the conversion of Farmland to non-agricultural uses. Thus, the contribution of the proposed project to the significant cumulative impact would be ***cumulatively considerable***.

Mitigation Measure(s)

Implementation of the following mitigation measure would help reduce the incremental contribution towards the cumulative impact related to conversion of important farmland identified above. However, the impact would remain *cumulatively considerable* and *significant and unavoidable* due to the permanent loss of agricultural land attributable to the proposed project.

4.2-4 Implement Mitigation Measure 4.2-1.

4.3. Air Quality, Greenhouse Gas Emissions, and Energy

4.3 AIR QUALITY, GREENHOUSE GAS EMISSIONS, AND ENERGY

4.3.1 INTRODUCTION

The Air Quality, Greenhouse Gas Emissions, and Energy chapter of the EIR describes the potential impacts of the proposed project on local and regional air quality emissions, potential impacts related to greenhouse gas (GHG) emissions and climate change, and potential impacts related to energy. The chapter includes a discussion of the existing air quality, GHG, and energy setting, the existing regulatory setting, as well as potential local and regional air quality, GHG, and energy impacts resulting from construction and operation of the project. In addition, the chapter includes mitigation measures warranted to reduce or eliminate any identified significant impacts. The chapter is primarily based on information and guidance within the Yolo-Solano Air Quality Management District (YSAQMD) Handbook for Assessing and Mitigating Air Quality Impacts,[1] as well as the City of Davis General Plan[2] and associated City of Davis General Plan EIR,[3] the City of Davis Climate Action and Adaptation Plan (CAAP),[4] and a technical analysis performed by Raney Planning and Management, Inc. (see Appendix G).

4.3.2 EXISTING ENVIRONMENTAL SETTING

The following information provides an overview of the existing environmental setting in relation to air quality within the project area. Air basin characteristics, ambient air quality standards (AAQS), attainment status and regional air quality plans, local air quality monitoring, odors, and sensitive receptors are discussed. In addition to the information pertaining to air quality, information related to climate change and GHGs, as well as energy, is provided.

Air Basin Characteristics

The City of Davis is located in Yolo County, within the Yolo-Solano portion of the Sacramento Valley Air Basin (SVAB), which is under the jurisdiction of the YSAQMD. Air quality in the SVAB is largely the result of the following factors: emissions, geography, and meteorology (wind, atmospheric stability, and sunlight). The Sacramento Valley is often described as a bowl-shaped valley, with the SVAB being bounded by the North Coast Ranges on the west, the northern Sierra Nevada Mountains on the east, and the intervening terrain being flat.

The Sacramento Valley has a Mediterranean climate, characterized by hot, dry summers and mild, rainy winters. During the year, the temperature may range from 20 to 115 degrees Fahrenheit, with summer highs usually in the 90-degree Fahrenheit range and winter lows occasionally below freezing. Average annual rainfall is approximately 20 inches, with snowfall being very rare. The winds in the area are moderate in strength and vary from moist, clean breezes from the south to dry land flows from the north.[5]

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1 Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts*. July 11, 2007.
2 City of Davis. *Davis General Plan*. Adopted May 2001, Amended January 2007.
3 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.
4 City of Davis. *Climate Action and Adaptation Plan*. April 18, 2023.
5 Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts*. July 11, 2007.

The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right, and a temperature inversion exists. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during autumn and early winter and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning, which is regulated through YSAQMD permits, or when temperature inversions trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds, with the Delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. However, during approximately half of the days from July to September, a phenomenon called the "Schultz Eddy" prevents the transport from occurring. Instead of allowing for the prevailing wind patterns to move north, carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern and pollutants to circle back southward. The Schultz Eddy effect exacerbates the pollution levels in the area and increases the likelihood of violating the federal and State air quality standards.

Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established AAQS for common pollutants. The federal standards are divided into primary standards, which are designed to protect the public health, and secondary standards, which are designed to protect the public welfare. The AAQS for each contaminant represents safe levels that avoid specific adverse health effects. Pollutants for which AAQS have been established are called "criteria" pollutants. Table 4.3-1 identifies the major pollutants, characteristics, health effects and typical sources. The national and California AAQS (NAAQS and CAAQS, respectively) are summarized in Table 4.3-2. The NAAQS and CAAQS were developed independently with differing purposes and methods. As a result, the national and State standards differ in some cases. In general, the State of California standards are more stringent than the federal standards, particularly for ozone and particulate matter (PM).

A description of each criteria pollutant and its potential health effects is provided in the following section.

Ozone

Ozone is a reactive gas consisting of three oxygen atoms. In the troposphere, ozone is a product of the photochemical process involving the sun's energy, and is a secondary pollutant formed as a result of a complex chemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NO_X) emissions in the presence of sunlight. As such, unlike other pollutants, ozone is not released directly into the atmosphere from any sources. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

The primary sources of ozone precursors are mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment.

Ground-level ozone reaches the highest level during the afternoon and early evening hours. High levels occur most often during the summer months.

Table 4.3-1
Summary of Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive gas produced by the photochemical process involving a chemical reaction between the sun's energy and other pollutant emissions. Often called photochemical smog.	• Eye irritation • Wheezing, chest pain, dry throat, headache, or nausea • Aggravated respiratory disease such as emphysema, bronchitis, and asthma	Combustion sources such as factories, automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	An odorless, colorless, highly toxic gas that is formed by the incomplete combustion of fuels.	• Impairment of oxygen transport in the bloodstream • Impaired vision, reduced alertness, chest pain, and headaches • Can be fatal in the case of very high concentrations	Automobile exhaust, combustion of fuels, and combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	A reddish-brown gas that discolors the air and is formed during combustion of fossil fuels under high temperature and pressure.	• Lung irrigation and damage • Increased risk of acute and chronic respiratory disease	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	A colorless, irritating gas with a rotten egg odor formed by combustion of sulfur-containing fossil fuels.	• Aggravation of chronic obstruction lung disease • Increased risk of acute and chronic respiratory disease	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	A complex mixture of extremely small particles and liquid droplets that can easily pass through the throat and nose and enter the lungs.	• Aggravation of chronic respiratory disease • Heart and lung disease • Coughing • Bronchitis • Chronic respiratory disease in children • Irregular heartbeat • Nonfatal heart attacks	Combustion sources such as automobiles, power generation, industrial processes, and wood burning. Also from unpaved roads, farming activities, and fugitive windblown dust.
Lead	A metal found naturally in the environment as well as in manufactured products.	• Loss of appetite, weakness, apathy, and miscarriage • Lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract	Industrial sources and combustion of leaded aviation gasoline.

Sources:

- ***CARB. California Ambient Air Quality Standards (CAAQS). Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed May 2025.***
- ***Sacramento Metropolitan, El Dorado, Feather River, Placer, and Yolo-Solano Air Districts, Spare the Air website. Air Quality Information for the Sacramento Region. Available at: sparetheair.com. Accessed May 2025.***
- ***CARB. Glossary of Air Pollution Terms. Available at: https://ww2.arb.ca.gov/glossary. Accessed May 2025.***

Table 4.3-2
Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone	1 Hour	0.09 ppm	-	Same as primary
	8 Hour	0.070 ppm	0.070 ppm	
Carbon Monoxide	8 Hour	9 ppm	9 ppm	-
	1 Hour	20 ppm	35 ppm	
Nitrogen Dioxide	Annual Mean	0.030 ppm	53 ppb	Same as primary
	1 Hour	0.18 ppm	100 ppb	-
Sulfur Dioxide	24 Hour	0.04 ppm	-	-
	3 Hour	-	-	0.5 ppm
	1 Hour	0.25 ppm	75 ppb	-
Respirable Particulate Matter (PM_{10})	Annual Mean	20 ug/m^3	-	Same as primary
	24 Hour	50 ug/m^3	150 ug/m^3	
Fine Particulate Matter ($PM_{2.5}$)	Annual Mean	12 ug/m^3	9 ug/m^3	15 ug/m^3
	24 Hour	-	35 ug/m^3	Same as primary
Lead	30 Day Average	1.5 ug/m^3	-	-
	Calendar Quarter	-	1.5 ug/m^3	Same as primary
Sulfates	24 Hour	25 ug/m^3	-	-
Hydrogen Sulfide	1 Hour	0.03 ppm	-	-
Vinyl Chloride	24 Hour	0.010 ppm	-	-
Visibility Reducing Particles	8 Hour	see note below	-	-

ppm = parts per million
ppb = parts per billion
µg/m^3 = micrograms per cubic meter

Note: Statewide Visibility Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Source: ***CARB. Ambient Air Quality Standards. July 16, 2024. Available at: https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf. Accessed May 2025.***

Ground-level ozone is a strong irritant that could cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen. Ozone at the Earth's surface causes numerous adverse health effects and is a major component of smog. High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments.

Reactive Organic Gas

ROG refers to several reactive chemical gases composed of hydrocarbon compounds typically found in paints and solvents that contribute to the formation of smog and ozone by involvement in atmospheric chemical reactions. A separate health standard does not exist for ROG. However, some compounds that make up ROG are toxic, such as the carcinogen benzene.

Oxides of Nitrogen

NO_X are a family of gaseous nitrogen compounds and are precursors to the formation of ozone and particulate matter. The major component of NO_X, nitrogen dioxide (NO_2), is a reddish-brown gas that discolors the air and is toxic at high concentrations. NO_X results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of NO_X. NO_X reacts with ROG to form smog, which could result in adverse impacts to human health, damage the environment, and cause poor visibility. Additionally, NO_X emissions are a major component of acid rain. Health effects related to NO_X include lung irritation and lung damage and can cause increased risk of acute and chronic respiratory disease.

Nitrogen Dioxide

A particular oxide of nitrogen that is of concern to human health is NO_2. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas.

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the AAQS for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, several epidemiological studies have demonstrated associations 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. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, poisonous gas produced by incomplete burning of carbon-based fuels such as gasoline, oil, and wood. When CO enters the body, the CO combines with chemicals in the body, which prevents blood from carrying oxygen to cells, tissues, and organs. Symptoms of exposure to CO can include problems with vision, reduced alertness, and general reduction in mental and physical functions. Exposure to CO can result in chest pain, headaches, reduced mental alertness, and death at high concentrations.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless, irritating gas with a rotten egg odor formed primarily by the combustion of sulfur-containing fossil fuels from mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Similar to airborne NO_X, suspended sulfur oxide particles contribute to poor visibility. The sulfur oxide particles are also a component of PM_{10}.

Particulate Matter

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health impacts. The USEPA is concerned about particles that are 10 micrometers in diameter or smaller (PM_{10}) because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, the particles could affect the heart and lungs and cause serious health effects. USEPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5-10}$)," which are found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5-10}$ is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," which are found in smoke and haze, are 2.5 micrometers in diameter and smaller. $PM_{2.5}$ particles could be directly emitted from sources such as forest fires, or could form when gases emitted from power plants, industries, and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- “Ultrafine particles (UFP),” are very, very small particles (less than 0.1 micrometers in diameter) largely resulting from the combustion of fossil fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, their high surface area, deep lung penetration, and transfer into the bloodstream could result in disproportionate health impacts relative to their mass. UFP is not currently regulated separately but is analyzed as part of $PM_{2.5}$.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants, which are emitted directly to the atmosphere and secondary pollutants, which are formed in the atmosphere by chemical reactions among precursors. Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include the same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust. Long-term PM pollution, especially fine particles, could result in significant health problems including, but not limited to, the following: increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; decreased lung function; aggravated asthma; development of chronic respiratory disease in children; development of chronic bronchitis or obstructive lung disease; irregular heartbeat; heart attacks; and increased blood pressure.

Lead

Lead is a relatively soft and chemically resistant metal that is a natural constituent of air, water, and the biosphere. Lead forms compounds with both organic and inorganic substances. As an air pollutant, lead is present in small particles. Sources of lead emissions in California include a variety of industrial activities. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically. However, because lead was emitted in large amounts from vehicles when leaded gasoline was used, lead is present in many soils (especially urban soils) as a result of airborne dispersion and could become re-suspended into the air.

Because lead is slowly excreted by the human body, exposures to small amounts of lead from a variety of sources could accumulate to harmful levels. Effects from inhalation of lead above the

level of the AAQS may include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms could include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children. Lead also causes cancer.

Sulfates

Sulfates are the fully oxidized ionic form of sulfur and are colorless gases. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. The sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The sulfates standard established by CARB is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, because they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide

Hydrogen sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations, especially in enclosed spaces (800 ppm can cause death).

Vinyl Chloride

Vinyl chloride (C_2H_3Cl, also known as VCM) is a colorless gas that does not occur naturally, but is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride (PVC) which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Visibility Reducing Particles

Visibility reducing particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are also a category of environmental concern. TACs are present in many types of emissions with varying degrees of toxicity. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Common stationary sources of TACs include gasoline stations, dry cleaners, and diesel backup generators, which are subject to YSAQMD stationary source permit requirements. The other, often more significant, common source type is on-road motor vehicles, such as cars and trucks, on freeways and roads, and off-road sources such as construction equipment, ships, and trains.

Fossil fueled combustion engines, including those used in cars, trucks, and some pieces of construction equipment, release at least 40 different TACs. In terms of health risks, the most volatile contaminants are diesel particulate matter (DPM), benzene, formaldehyde, 1,3-butadiene, toluene, xylenes, and acetaldehyde. Gasoline vapors contain several TACs, including benzene, toluene, and xylenes. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust, DPM, is composed of carbon particles and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of such chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including ROG and NO_X. Due to the published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects, the CARB has identified DPM from diesel-fueled engines as a TAC. Although a variety of TACs are emitted by fossil fueled combustion engines, the cancer risk due to DPM exposure represents a more significant risk than the other TACs discussed above.[6]

More than 90 percent of DPM is less than one micrometer in diameter, and, thus, DPM is a subset of $PM_{2.5}$. As a California statewide average, DPM comprises about eight percent of $PM_{2.5}$ in outdoor air, although DPM levels vary regionally due to the non-uniform distribution of sources throughout the State. Most major sources of diesel emissions, such as ships, trains, and trucks, operate in and around ports, rail yards, and heavily-traveled roadways. Such areas are often located near highly populated areas. Thus, elevated DPM levels are mainly an urban problem, with large numbers of people exposed to higher DPM concentrations, resulting in greater health consequences compared to rural areas.

Due to the high levels of diesel activity, high volume freeways, stationary diesel engines, rail yards and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Construction-related activities also have the potential to generate concentrations of DPM from on-road haul trucks and off-road equipment exhaust emissions.

The size of diesel particulates that are of the greatest health concern are fine particles (i.e., $PM_{2.5}$) and UFPs. The small diameter of UFPs imparts the particulates with unique attributes, such as high surface areas and the ability to penetrate deeply into lungs. Once UFPs have been deposited in lungs, the small diameter allows the UFPs to be transferred to the bloodstream. The high surface area of the UFPs also allows for a greater adsorption of other chemicals, which are transported along with the UFPs into the bloodstream of the inhaler, where the chemicals can eventually reach critical organs.[7] The penetration capability of UFPs may contribute to adverse health effects related to heart, lung, and other organ health.[8] UFPs are a subset of DPM and activities that create large amounts of DPM, such as the operations involving heavy diesel-powered engines, also release UFPs. Considering that UFPs are a subset of DPM, and DPM represents a subset of $PM_{2.5}$, estimations of either concentrations or emissions of $PM_{2.5}$ or DPM include UFPs.

Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, which typically are associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer can include birth

6 California Air Resources Board. *Reducing Toxic Air Pollutants in California's Communities*. February 6, 2002.
7 Health Effects Institute. *Understanding the Health Effects of Ambient Ultrafine Particles*. January 2013.
8 South Coast Air Quality Management District. *Final 2012 Air Quality Management Plan*. December 2012.

defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to criteria air pollutants that have established AAQS. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an AAQS or emission-based threshold.

Naturally Occurring Asbestos

Another concern related to air quality is naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Because asbestos is a known carcinogen, NOA is considered a TAC. 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.

According to mapping prepared by the California Geological Survey, Yolo County is not in an area likely to contain NOA.[9] Therefore, NOA is not expected to be present at the project site.

Attainment Status and Regional Air Quality Plans

The Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified as to their status with regard to the NAAQS and/or CAAQS. Areas not meeting the NAAQS presented in Table 4.3-2, above, are designated by the USEPA as nonattainment. Further classifications of nonattainment areas are based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. Because of the differences between the national and State standards, the designation of nonattainment areas is different under the federal and State legislation. The FCAA requires areas violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains strategies and control measures for states to use to attain the NAAQS. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA reviews SIPs to determine if they conform to the mandates of the FCAA amendments and would achieve air quality goals when implemented.

The CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violations of CAAQS. The CCAA requires local air pollution control districts with air quality that is in violation of CAAQS to prepare air quality attainment plans that demonstrate district-wide emission reductions of five percent per year averaged over consecutive three-year periods, unless an approved alternative measure of progress is developed.

[9] California Department of Conservation, Division of Mines and Geology. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. August 2000.

Table 4.3-3 below presents the current attainment status of the jurisdictional area of the YSAQMD, including Yolo County. As shown in the table, Yolo County is in an area designated as attainment for all State and federal AAQS, with the exception of ozone, PM_{10}, and $PM_{2.5}$. At the federal level, the area is designated as severe nonattainment for the 8-hour ozone standard, nonattainment for the 24-hour $PM_{2.5}$ standard, and attainment or unclassified for all other criteria pollutants. At the State level, the area is designated as a nonattainment area for the 1-hour ozone standard, nonattainment for the 8-hour ozone standard, nonattainment for the PM_{10} standards, and attainment or unclassified for all other State standards. Although the 1-hour federal ozone standard was revoked, on October 18, 2012, the USEPA officially determined that the Sacramento Federal Nonattainment Area (SFNA), which includes Sacramento and Yolo counties, Placer and El Dorado counties (except Lake Tahoe Basin portions), Solano County (eastern portion), and Sutter County (southern portion), attained the revoked 1-hour ozone NAAQS. The determination became effective November 19, 2012.

Table 4.3-3
Attainment Status

Pollutant	Designation/Classification	
	Federal Standards	**State Standards**
Ozone – 1-Hour	Revoked in 2005	**Nonattainment**
Ozone – 8-Hour	**Nonattainment**	**Nonattainment**
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
PM_{10} – 24-Hour	Unclassified	**Nonattainment**
PM_{10} – Annual	--	**Nonattainment**
$PM_{2.5}$ – 24-Hour	**Nonattainment**	--
$PM_{2.5}$ – Annual	Unclassified	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Unclassified

Source: YSAQMD. Attainment Status. Available at: https://www.ysaqmd.org/plans-data/attainment/. Accessed May 2025.

In compliance with the FCAA and CCAA, due to the nonattainment designations, the YSAQMD, along with the other air districts in the SVAB region, is required to develop plans to attain the federal and State standards for ozone and PM. The air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control measures have worked, and show how air pollution would be reduced. In addition, the plans include the estimated future levels of pollution to ensure that the area would meet air quality goals. Each of the attainment plans currently in effect are discussed in further detail in the Regulatory Context discussion of this chapter.

Local Air Quality Monitoring

Air quality is monitored by CARB at various locations to determine which air quality standards are being violated, and to direct emission reduction efforts, such as developing attainment plans and rules, incentive programs, etc. The nearest local air quality monitoring station to the project site is the Davis-UCD Campus station, located along Campbell Road between Hutchinson Drive and Garrod Road in Davis, approximately 3.85 miles from the project site. The Davis-UCD Campus

station does not have data available for $PM_{2.5}$ or PM_{10}; thus, the nearest station with $PM_{2.5}$ and PM_{10} data was used, which was the Woodland-Gibson Road station located at 41929 Gibson Road in Woodland, approximately six miles northwest of the project site. Table 4.3-4 presents the number of days that the NAAQS and CAAQS were exceeded for the three-year period from 2021 to 2023.

Table 4.3-4
Air Quality Data Summary (2021-2023)

Pollutant	Standard	Days Standard Was Exceeded		
		2021	2022	2023
1-Hour Ozone	State	0	0	0
	Federal	0	0	0
8-Hour Ozone	State	3	1	0
	Federal	2	1	0
24-Hour $PM_{2.5}$	Federal	0	0	1
24-Hour PM_{10}	State	4	2	2
	Federal	0	0	0
1-Hour Nitrogen Dioxide	State	0	0	0
	Federal	0	0	0

Source: CARB. Aerometric Data Analysis and Management (iADAM) System. Available at http://www.arb.ca.gov/adam/welcome.html. Accessed May 2025.

Odors

While offensive odors rarely cause physical harm, they can be unpleasant, leading to considerable annoyance and distress among the public and can generate citizen complaints to local governments and air districts. Adverse effects of odors on residential areas and other sensitive receptors warrant the closest scrutiny; but consideration is also given to other land use types where people congregate, such as recreational facilities, worksites, and commercial areas. The potential for an odor impact is dependent on a number of variables including the nature of the odor source, distance between a receptor and an odor source, and local meteorological conditions.

One of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, also referred to as a buffer zone or setback. The greater the distance between an odor source and receptor, the less concentrated the odor emission would be when reaching the receptor.

Meteorological conditions also affect the dispersion of odor emissions, which determines the exposure concentration of odiferous compounds at receptors. The predominant wind direction in an area influences which receptors are exposed to the odiferous compounds generated by a nearby source. Receptors located upwind from a large odor source may not be affected due to the produced odiferous compounds being dispersed away from the receptors. Wind speed also influences the degree to which odor emissions are dispersed away from any area.

Odiferous compounds could be generated from a variety of source types including both construction and operational activities. Examples of common land use types that typically generate significant odor impacts include, but are not limited to, wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. The project site is not located near any of the aforementioned odor-generating uses.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. In the vicinity of the project site, sensitive land uses include residential uses to the west located approximately 220 feet from the project site and to the south located approximately 150 feet from the project site across East Covell Boulevard. Additionally, a junior high school is located 150 feet southeast of the project site across East Covell Boulevard.

Greenhouse Gas Emissions

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the Earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.

The primary GHG emitted by human activities is CO_2, with the next largest components being CH_4 and N_2O. A wide variety of human activities result in the emission of CO_2. Some of the largest sources of CO_2 include the burning of fossil fuels for transportation and electricity, industrial processes including fertilizer production, agricultural processing, and cement production. The primary sources of CH_4 emissions include domestic livestock sources, decomposition of wastes in landfills, releases from natural gas systems, coal mine seepage, and manure management. The main human activities producing N_2O are agricultural soil management, fuel combustion in motor vehicles, nitric acid production, manure management, and stationary fuel combustion. Emissions of GHG by economic sector indicate that transportation-related activities account for the majority of U.S. emissions. Transportation is the largest single-source of GHG emissions, and electricity generation is the second largest source, followed by industrial activities. The agricultural, commercial, and residential sectors account for the remainder of GHG emission sources.[10]

Emissions of GHG are partially offset by uptake of carbon and sequestration in trees, agricultural soils, landfilled yard trimmings and food scraps, and absorption of CO_2 by the Earth's oceans. Additional emission reduction measures for GHG could include, but are not limited to, compliance with local, State, or federal plans or strategies for GHG reductions, on-site and off-site mitigation, and project design features. Attainment concentration standards for GHGs have not been established by the federal or State government.

Global Warming Potential

Global warming potential (GWP) is one type of simplified index (based upon radiative properties) that can be used to estimate the potential future impacts of emissions of various gases. According to the USEPA, the GWP of a gas, or aerosol, to trap heat in the atmosphere is the "cumulative

[10] U.S. Environmental Protection Agency. *Sources of Greenhouse Gas Emissions*. Available at: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions. Accessed June 2025.

radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." The reference gas for comparison is CO_2. GWP is based on a number of factors, including the heat-absorbing ability of each gas relative to that of CO_2, as well as the decay rate of each gas relative to that of CO_2. Each gas's GWP is determined by comparing the radiative forcing associated with emissions of that gas versus the radiative forcing associated with emissions of the same mass of CO_2, for which the GWP is set at one. Methane gas, for example, is estimated by the USEPA to have a comparative global warming potential 25 times greater than that of CO_2, as shown in Table 4.3-5.

Table 4.3-5
GWPs and Atmospheric Lifetimes of Select GHGs

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
Carbon Dioxide (CO_2)	See footnote[1]	1
Methane (CH_4)	12.4	28
Nitrous Oxide (N_2O)	121	265
HFC-23	222	14,400
HFC-134a	13.4	1,300
HFC-152a	1.5	138
PFC: Tetrafluoromethane (CF_4)	50,000	6,630
PFC: Hexafluoroethane (C_2F_6)	10,000	11,100
Sulfur Hexafluoride (SF_6)	3,200	23,500

[1] For a given amount of CO_2 emitted, some fraction of the atmospheric increase in concentration is quickly absorbed by the oceans and terrestrial vegetation, some fraction of the atmospheric increase will only slowly decrease over a number of years, and a small portion of the increase will remain for many centuries or more.

Source: USEPA. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022 [Table 1-2]. April 11, 2024.

As shown in the table, at the extreme end of the scale, sulfur hexafluoride is estimated to have a comparative GWP 23,500 times that of CO_2. The atmospheric lifetimes of such GHGs are estimated by the USEPA to vary from 50 to 200 years for CO_2, to 50,000 years for CF_4. Longer atmospheric lifetimes allow GHG to build up in the atmosphere; therefore, longer lifetimes correlate with the GWP of a gas. The common indicator for GHG is expressed in terms of metric tons of CO_2 equivalents ($MTCO_2e$), which is calculated based on the GWP for each pollutant.

Effects of Global Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The Intergovernmental Panel on Climate Change's (IPCC) Climate Change 2021: The Physical Science Basis report indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia.[11] Signs that global climate change has occurred include:

- Warming of the atmosphere and ocean;
- Diminished amounts of snow and ice;

[11] Intergovernmental Panel on Climate Change. *Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. 2021.

- Rising sea levels; and
- Ocean acidification.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment (OEHHA) identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring in California and is having significant, measurable impacts in the State. Changes in the State's climate have been observed, including:

- An increase in annual average air temperature with record warmth in recent years;
- More frequent extreme heat events;
- More extreme drought;
- A decline in winter chill; and
- An increase in variability of statewide precipitation.

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the State depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the State's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters. Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. However, it should be noted that the effects of climate change are not fully understood. For example, due to a series of atmospheric rivers that occurred throughout the 2022-2023 winter season, California saw the most snow the State has seen since the record was set in the 1982-1983 winter season. The California Department of Water Resources (DWR) has noted that the snowpack in the Sierra was 205 percent of the average in February 2023,[12] 190 percent of the average for March 2023,[13] 237 percent of the average for April 2023,[14] and 254 percent of the average for May of 2023.[15]

Nonetheless, according to the Climate Change Vulnerability Assessment conducted as part of the City's CAAP, like much of California, the City is already experiencing impacts from extreme heat events, flooding and extreme precipitation, drought and poor air quality caused by wildfire smoke. The Climate Change Vulnerability Assessment identified how such impacts are likely to

[12] California Department of Water Resources. *Second Snow Survey Reflects Boost from Atmospheric Rivers.* Available at: https://water.ca.gov/News/News-Releases/2023/Feb-23/Second-Snow-Survey-Reflects-Boost-from-Atmospheric-Rivers. Accessed June 2025.

[13] California Department of Water Resources. *California's Snowpack Shows Huge Gains from Recent Storms.* Available at: https://water.ca.gov/News/News-Releases/2023/March-23/March-2023-Snow-Survey. Accessed June 2025.

[14] California Department of Water Resources. *California's Snowpack is Now One of the Largest Ever, Bringing Drought Relief, Flooding Concerns.* Available at: https://water.ca.gov/News/News-Releases/2023/April-23/Snow-Survey-April-2023. Accessed June 2025.

[15] California Department of Water Resources. *DWR Conducts May 1 Snow Survey to Continue to Collect Data on Spring Runoff.* Available at: https://water.ca.gov/News/News-Releases/2023/May-2023/May-2023-Snow-Survey. Accessed June 2025.

change through mid-century and end-of-century timeframes. Specifically, projected changes include an increase in the number of extreme heat days, increased wildfire frequency and intensity, more intense precipitation events, and more frequent and/or prolonged droughts.[16]

Energy Use in California

California is one of the highest energy demanding states within the nation. According to the U.S. Department of Energy, the State consumes approximately 303,300 gigawatt-hours (GWh) of electricity per year.[17] Activities such as heating and cooling structures, lighting, the movement of goods, agricultural production, and other facets of daily life consume a variety of energy sources. However, despite California's high rate of energy use, the State has one of the lowest per capita energy consumption levels in the U.S.

In 2023, California was the fourth-largest electricity producer in the nation.[18] Energy within the State is provided primarily to consumers through a mix of sources including natural gas, hydroelectric, non-hydroelectric renewable sources, nuclear, coal, and petroleum. California is the nation's top producer of electricity from solar, geothermal, and biomass energy. Renewable resources, including hydroelectric power and small-scale (less than 1-megawatt [MW]), customer-sited solar photovoltaic (PV) systems, accounted for 49 percent of California's in-state electricity generation; natural gas-fired power plants fueled another 42 percent of the State's energy generation; and nuclear power supplied almost all the rest.

Figure 4.3-1 presents the sources that are used to produce energy in the State. As presented therein, energy is mostly generated from non-hydroelectric renewables (such as wind and solar), followed by natural gas combustion and hydroelectric.

Figure 4.3-2 presents energy consumption within California for the most recent year for which data is available (2023). As shown in the figure, transportation-related activity consumes the largest single share of energy within the State. The second largest consumer is the industrial sector.

Of the total electricity supplied to the State in the year 2022, the most recent year such data is available, Yolo County consumed approximately 1,797 GWh,[19] which constitutes approximately 0.6 percent of the total energy consumed annually within the State.

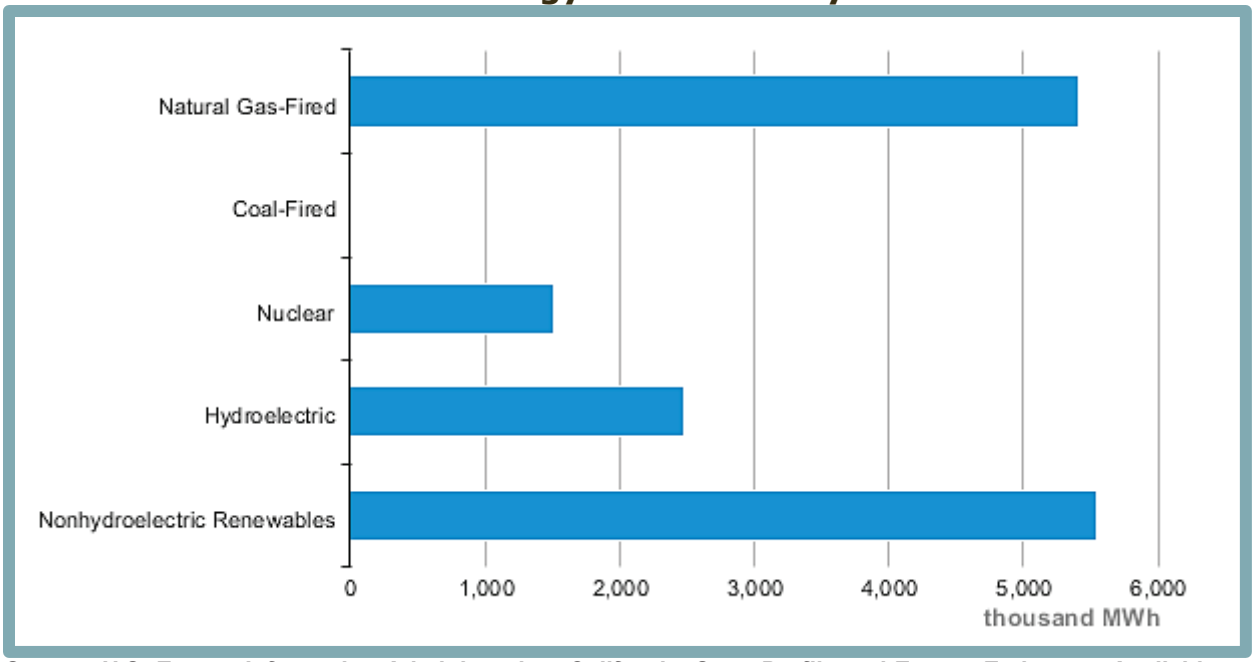
Energy Consumption Within the City of Davis and at the Project Site

Historically, electricity and natural gas has been supplied to the City of Davis by the Pacific Gas and Electric Company (PG&E). However, on October 25, 2016, the Davis City Council adopted Resolution Number 16-153, Series 2016, which approved the Joint Exercise of Powers Agreement with Yolo County to form the Valley Clean Energy Alliance, now referred to as Valley Clean Energy (VCE). The resolution adopted by the City, along with similar resolutions adopted by the City of Woodland and Yolo County, led to the formation of the VCE Joint Powers Authority.

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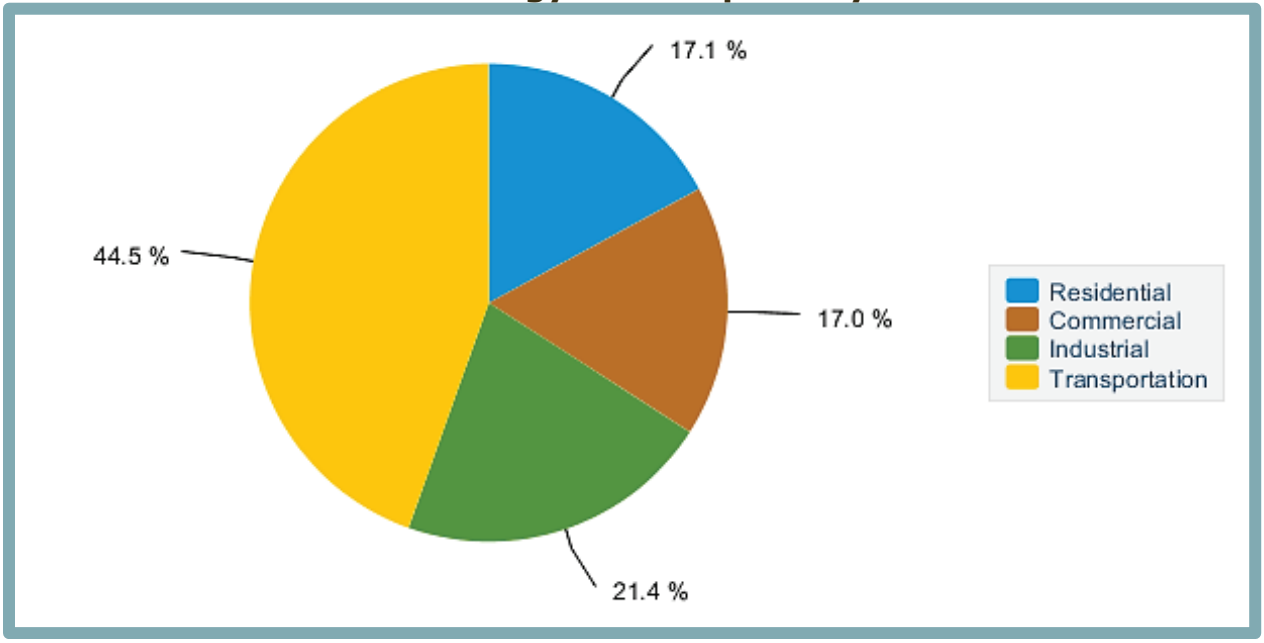
16 City of Davis. *Climate Action and Adaptation Plan* [pg. 42]. April 18, 2023.
17 U.S. Department of Energy. *State of California Energy Sector Risk Profile.* March 2021.
18 California Energy Information Administration. *California State Profile and Energy Estimates*. Available at: https://www.eia.gov/state/analysis.php?sid=CA#22. Accessed June 2025.
19 California Energy Commission. *Electricity Consumption by County*. Available at: http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed June 2025.

Figure 4.3-1
California Energy Generation by Source



Source: U.S. Energy Information Administration. California: State Profile and Energy Estimates. Available at: https://www.eia.gov/state/index.php?sid=CA. Accessed June 2025.

Figure 4.3-2
California Energy Consumption by Sector



Source: U.S. Energy Information Administration. California: State Profile and Energy Estimates. Available at: https://www.eia.gov/state/index.php?sid=CA. Accessed June 2025.

Beginning in June 2018, the VCE started serving the electricity needs of the cities of Woodland and Davis, as well as unincorporated areas of Yolo County. Customers within the participating areas have the opportunity to continue receiving service from PG&E or to receive energy from VCE. VCE plans to provide energy with a higher renewable content and lower associated GHG emissions than PG&E. While VCE supplies the energy for customers enrolled in the VCE program, VCE electricity is transmitted through PG&E owned and operated distribution and power lines. PG&E would continue to provide natural gas supplies to the City.

Given the existing nature of the project site, which consists of generally flat agricultural land with three private, dirt access roads and a drainage course (Channel A), the existing energy demand associated with the project site is little to null.

Public Safety Power Shutoffs

In an effort to prevent fires, PG&E initiated public safety power shutoffs (PSPS) in 2019, which may continue in subsequent years until fire risks associated with power lines are decreased. PSPS events involve PG&E turning off electrical service during times when the weather is predicted to have a heightened fire risk from gusty winds and dry conditions. Dependent on the fire risks, the power outage events may occur in specific areas or for all PG&E customers across the City. Based on the project site's location, the site is not located within an area that is more likely to be affected by a PSPS event.[20] Areas more likely to be affected by a PSPS event include areas where PSPS events have previously occurred, or areas in or near high fire-risk areas. However, according to PG&E, zero PSPS events have occurred within the City of Davis since the initiative began in 2019.

4.3.3 REGULATORY CONTEXT

Air quality, GHG emissions, and energy consumption are monitored and regulated through the efforts of various international, federal, State, and local government agencies. Agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for regulating and improving the air quality within the project area and monitoring or reducing GHG emissions and energy consumption are discussed below.

Federal Regulations Related to Air Quality

The following discussion provides a summary of the federal regulations relevant to air quality, organized by pollutant type.

Criteria Pollutants

The FCAA, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The USEPA is responsible for implementing most aspects of the FCAA, including setting NAAQS for major air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric ozone protection measures, and enforcement provisions. Under the FCAA, NAAQS are established for the following criteria pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

[20] Pacific Gas & Electric Co. *Interactive PSPS Planning Map.* Available at: https://vizmap.ss.pge.com/?_ga=2.94997403.624386528.1664230975-1068345172.1664230975. Accessed June 2025.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The FCAA requires the USEPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

Hazardous Air Pollutants/Toxic Air Contaminants

The 1977 FCAA amendments required the USEPA to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAA Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

Federal Regulations Related to GHG Emissions

The following are the federal regulations relevant to GHG emissions.

Federal Vehicle Standards

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, USEPA, and National Highway Traffic Safety Administration (NHTSA) to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards were projected to achieve emission rates as low as 163 grams of CO_2 per mile by model year 2025 on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if the foregoing emissions level was achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intended to set standards for model years 2022 through 2025 in future rulemaking.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program would have applied to vehicles with model years 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types of sizes of buses and work trucks. The final standards were expected to lower CO_2 emissions by approximately 1.1 billion metric tons (MT), and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

In August 2018, the USEPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new, less-stringent standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards that were previously in place, the 2018 proposal would increase U.S. fuel consumption by approximately 0.5 million barrels per day, and would impact the global climate by 3/1000th of one degree Celsius by 2100. California and other states stated their intent to challenge federal actions that would

delay or eliminate GHG reduction measures, and committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the USEPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51,310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission-vehicle mandates in California. On March 31, 2020, the USEPA and NHTSA issued the Part Two Rule, which sets CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. On January 20, 2021, an Executive Order (EO) was issued on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of the Part One Rule by April 2021 and review of the Part Two Rule by July 2021. In response to the Part One Rule, in December 2021, the U.S. Department of Transportation withdrew its portions of the "SAFE I" rule. As a result, states are now allowed to issue their own GHG emissions standards and zero-emissions vehicle mandates.[21] In addition, the Part Two Rule was adopted to revise the existing national GHG emission standards for passenger cars and light trucks through model year 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and will result in avoiding more than three billion tons of GHG emissions through 2050.[22]

Federal Regulations Related to Energy

The following are the federal regulations relevant to energy.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act was originally enacted in 1975 with the intention of ensuring that all vehicles sold in the U.S. meet established fuel economy standards. Following congressional establishment of the original set of fuel economy standards the U.S. Department of Transportation was tasked with establishing additional on-road vehicle standards and making revisions to standards as necessary. Compliance with established standards is based on manufacturer fleet average fuel economy, which originally applied to both passenger cars and light trucks but did not apply to heavy-duty vehicles exceeding 8,500 pounds in gross vehicle weight. The fuel economy program implemented under the Energy Policy and Conservation Act is known as the Corporate Average Fuel Economy (CAFE) Standards. Updates to the CAFE standards since original implementation have increased fuel economy requirements and begun regulation of medium- and heavy-duty vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 addressed energy production in the U.S. from various sources. In particular, the Energy Policy Act of 2005 included tax credits, loans, and grants for the implementation of energy systems that would reduce GHG emissions related to energy production.

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21 National Highway Traffic Safety Administration. *In Removing Major Roadblock to State Action on Emissions Standards, U.S. Department of Transportation Advances Biden-Harris Administration's Climate and Jobs Goals.* Available at: https://www.nhtsa.gov/press-releases/cafe-preemption-final-rule. Accessed June 2025.

22 U.S. Environmental Protection Agency. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed June 2025.

State Regulations Related to Air Quality

The following discussion summarizes applicable State regulations related to air quality, organized by pollutant type. Only the most prominent and applicable California air quality-related legislation is included below. An exhaustive list and extensive details of California air quality legislation can be found at the CARB website (http://www.arb.ca.gov/html/lawsregs.htm).

Criteria Air Pollutants

The FCAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the CCAA of 1988, responding to the FCAA, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and do not violate the standards more than once each year. The CAAQS for ozone, CO, SO_2 (one-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.3-2.

Hazardous Air Pollutants/Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner), and involved definition of a list of TACs. The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. The State list of TACs includes the federally designated hazardous air pollutants. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and, if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

CARB Air Quality and Land Use Handbook

CARB's Air Quality and Land Use Handbook: A Community Health Perspective (CARB Handbook) addresses the importance of considering health risk issues when siting sensitive land uses, including residential development, in the vicinity of intensive air pollutant emission sources including freeways or high-traffic roads, distribution centers, ports, petroleum refineries, chrome plating operations, dry cleaners, and gasoline dispensing facilities (GDFs).[23] The CARB Handbook draws upon studies evaluating the health effects of traffic traveling on major interstate highways in metropolitan California centers within Los Angeles (Interstate-405 and Interstate-

[23] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

710), the San Francisco Bay, and San Diego areas. The recommendations identified by CARB, including siting residential uses a minimum distance of 500 feet from freeways or other high-traffic roadways, are consistent with those adopted by the State of California for location of new schools. Specifically, the CARB Handbook recommends, "Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day."[24]

Importantly, the Introduction chapter of the CARB Handbook clarifies that the guidelines are strictly advisory, recognizing that: "[l]and use decisions are a local government responsibility. The Air Resources Board Handbook is advisory and these recommendations do not establish regulatory standards of any kind." CARB recognizes that there may be land use objectives as well as meteorological and other site-specific conditions that need to be considered by a governmental jurisdiction relative to the general recommended setbacks, specifically stating, "[t]hese recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues."[25]

Diesel Particulate Matter

In 2000, CARB approved a comprehensive diesel risk reduction plan to reduce diesel emissions, including DPM, from new and existing diesel-fueled vehicles and engines. The regulation was anticipated to result in an 80 percent decrease in statewide diesel health risk by 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. The aforementioned regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. Several Airborne Toxic Control Measures (ATCMs) exist that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Heavy-Duty Diesel Truck and Bus Regulation

CARB adopted the final Heavy-Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce DPM and NO_X emissions from heavy-duty diesel vehicles. The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an ATCM to limit idling of diesel-fueled commercial vehicles on December 12, 2013. The rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than five minutes at any location (13 CCR 2485).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person must not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have

[24] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
[25] *Ibid*.

a natural tendency to cause, injury or damage to business or property. Section 41700 also applies to sources of objectionable odors.

Heavy-Duty Vehicle Idling Emission Reduction Program

On October 20, 2005, CARB approved a regulatory measure to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth equipped diesel trucks.[26] The regulation established new engine and in-use truck requirements and emission performance requirements for technologies used as alternatives to idling the truck's main engine. For example, the regulation requires 2008 and newer model year heavy-duty diesel engines to be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling, or optionally meet a stringent NO_X emission standard. The regulation also requires operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California. Emission producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements that ensure emissions are not exceeding the emissions of a truck engine operating at idle.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, CARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California.[27] Such vehicles are used in construction, mining, and industrial operations. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to less than five minutes. The idling requirements are specified in Title 13 of the CCR.

State Regulations Related to GHG Emissions

The statewide GHG emissions regulatory framework is summarized below. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues. The following discussion does not include an exhaustive list of applicable regulations; rather, only the most prominent and applicable California legislation related to GHG emissions and climate change is included below.

State Climate Change Targets

California has taken a number of actions to address climate change, including EOs, legislation, and CARB plans and requirements, which are summarized below.

Executive Order S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the State agencies for implementing the EO and for reporting on progress toward the targets. The EO established the following targets:

[26] California Air Resources Board. *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. October 24, 2013. Available at: https://ww2.arb.ca.gov/our-work/programs/atcm-to-limit-vehicle-idling. Accessed June 2025.

[27] California Air Resources Board. *In-Use Off-Road Diesel Vehicle Regulation*. December 10, 2014. Available at: http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm. Accessed June 2025.

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

EO S-3-05 also directed CalEPA to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issues yearly GHG reduction report cards to track the progress of emission reduction strategies. Each report card documents the effectiveness of measures to reduce GHG in California, presents GHG emissions from State agencies' operations, and shows reductions that have occurred in the two years prior to publication.

Assembly Bill 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive, multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives. AB 32 also required that the CARB prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020. The CARB's Scoping Plan is described in further detail below.

Executive Order B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for an update to the CARB's Climate Change Scoping Plan: A Framework for Change (Scoping Plan) to express the 2030 target in terms of million metric tons (MMT) of CO_2e. The CARB's Scoping Plan is discussed in further detail below. The EO also called for State agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill 32 and Assembly Bill 197

Senate Bill (SB) 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over the implementation of the State's climate policies. AB 197 also added two members of the Legislature to the Board as non-voting members; requires CARB to make available and update (at least annually through the CARB's website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code Section 38561[a]), and to update the Scoping Plan at least once every five years.

In 2008, CARB approved the first Scoping Plan. The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives. The key elements of the Scoping Plan include the following:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR, Section 95480 et seq.); and
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15 percent from 2008 levels by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the State's GHG emission reduction priorities for the next five years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuation of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the State's 1990 emissions level using more recent GWPs identified by the IPCC, from 427 MMT CO_2e to 431 MMT CO_2e.

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40 percent below 1990 levels by 2030 to keep California on a trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, as set forth in EO S-3-05. In summer 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, the Scoping Plan was once again updated. The 2017 Scoping Plan built upon the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that would serve as the framework to achieve the 2030 GHG target as established by SB 32 and define the State's climate change priorities to 2030 and beyond. For local governments, the 2017 Scoping Plan replaced the initial Scoping Plan's 15 percent reduction goal with a recommendation to aim for a communitywide goal of no more than six $MTCO_2e$ per capita by 2030, and no more than two $MTCO_2e$ per capita by 2050, which are consistent with the State's long-term goals. The 2017 Scoping Plan recognized the benefits of local government GHG planning (e.g., through Climate Action Plans [CAPs]) and provided more information regarding tools to support those efforts. The 2017 Scoping Plan also recognized the CEQA streamlining provisions for project-level review where a legally adequate CAP exists.

When discussing project-level GHG emissions reduction actions and thresholds in the context of CEQA, the 2017 Scoping Plan stated that "achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development" for project-level CEQA analysis, but also recognized that such a standard may not be appropriate or feasible for every development project. The 2017 Scoping Plan further provided that "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."

The most recent update to the Scoping Plan, the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) was adopted by the CARB in December 2022.[28] The 2022 Scoping Plan Update builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. The 2022 Scoping Plan Update, the most comprehensive and far-reaching Scoping Plan developed to date, identifies a technologically feasible and cost-effective path to achieve carbon neutrality by 2045 while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan. The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the Scoping Plan also includes discussion for the first time of the Natural and Working Lands (NWL) sectors as both sources of emissions and carbon sinks.

The 2022 Scoping Plan Update lays out a path to achieve targets for carbon neutrality and reduce GHG emissions by 85 percent below 1990 levels by 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on NWL to reduce emissions and sequester carbon, and the capture and storage of carbon.

CARB's Regulations for the Mandatory Reporting of GHG Emissions

CARB's Regulation for the Mandatory Reporting of GHG Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that the USEPA promulgated in its Final Rule on

[28] California Air Resources Board. *2022 Scoping Plan for Achieving Carbon Neutrality*. November 16, 2022.

Mandatory Reporting of GHGs (40 Code of Federal Regulations [CFR] Part 98). In general, entities subject to the Mandatory Reporting Regulation that emit more than 10,000 $MTCO_2e$ per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 $MTCO_2e$ per year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

Senate Bill 1383

SB 1383 establishes specific targets for the reduction of short-lived climate pollutants (SLCPs) (40 percent below 2013 levels by 2030 for CH_4 and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its SLCP Reduction Strategy in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

Executive Order B-55-18/Assembly Bill 1279

EO B-55-18 (September 2018) establishes a statewide policy for California to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net-negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the State's GHG emissions. CARB intends to work with relevant State agencies to ensure that future scoping plan updates identify and recommend measures to achieve the carbon neutrality goal. On September 16, 2022, AB 1279, also known as the California Climate Crisis Act, codified the carbon neutrality goal established by EO B-55-18.

Mobile Sources

The following regulations relate to the control of GHG emissions from mobile sources. Mobile sources include both on-road vehicles and off-road equipment.

Assembly Bill 1493

AB 1493 (Pavley) (July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles that are primarily used for non-commercial personal transportation in the State. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards would result in a reduction of approximately 22 percent of GHG emissions compared to the emissions from the 2002 fleet, and the mid-term (2013–2016) standards would result in a reduction of approximately 30 percent.

Senate Bill 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every eight years. SB 375 requires the State's 18 regional metropolitan planning organizations to prepare a sustainable communities strategy as part of their Regional Transportation Plans that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise a sustainable communities strategy to achieve the GHG reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved

through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to California Government Code Section 65080(b)(2)(K), a sustainable communities strategy does not (1) regulate the use of land, (2) supersede the land use authority of cities and counties, or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with the sustainable community strategy. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the State-mandated housing element process.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. By 2025, implementation of the rule is anticipated to reduce emissions of smog-forming pollution from cars by 75 percent compared to the average new car sold in 2015. To reduce GHG emissions, CARB, in conjunction with the USEPA and NHTSA, adopted GHG standards for model year 2017 to 2025 vehicles; the standards were estimated to reduce GHG emissions by 34 percent by 2025. The zero-emissions vehicle program acts as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of zero-emissions vehicles and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

In late April to early May, the U.S. House of Representatives passed three Congressional Review Act (CRA) resolutions to rescind the USEPA's waiver for the Advanced Clean Cars II Program. The Senate passed all three resolutions on May 22, 2025, and President Donald Trump signed the CRA resolutions on June 12, 2025. Subsequently, a lawsuit has been filed by the State Attorney General on June 12, 2025, against the federal government's use of the CRA to upend California's clean vehicles program.[29] As such, the future enforceability of the Advanced Clean Cars II Program is currently unknown.

Executive Order B-16-12

EO B-16-12 (March 2012) required that State entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. The order directed CARB, California Energy Commission (CEC), California Public Utilities Commission (CPUC), and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. EO B-16-12 did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

[29] State of California Department of Justice. *California Will Not Waver in Defending Itself from Federal Overreach: Attorney General Bonta Sues Trump Administration for Attack on California's Clean Vehicles Program*. Available at: https://oag.ca.gov/news/press-releases/california-will-not-waver-defending-itself-federal-overreach-attorney-general. Accessed June 12, 2025.

Assembly Bill 1236

AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric-vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based on substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and a feasible method to satisfactorily mitigate or avoid the specific, adverse impact does not exist. The bill provided for appeal of that decision to the planning commission, as specified. AB 1236 required electric-vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric-vehicle charging stations. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt the ordinance by September 30, 2017.

Water

The following regulations relate to the conservation of water, which reduces GHG emissions related to electricity demands from the treatment and transportation of water.

Executive Order B-29-15

In response to a drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives subsequently became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California DWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance (MWELO) that, among other changes, significantly increases the requirements for landscape water use efficiency, and broadens the applicability of the ordinance to include new development projects with smaller landscape areas.

Solid Waste

The following regulations relate to the generation of solid waste and means to reduce GHG emissions from solid waste produced within the State.

Assembly Bill 939 and Assembly Bill 341

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code [PRC] Sections 40000 et seq.), was passed because of the observed increase in waste stream and the decrease in landfill capacity.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that the policy goal of the State is that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery to develop strategies to achieve the State's policy goal.

Other State Actions

The following State regulations are broadly related to GHG emissions.

Senate Bill 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research (OPR) (currently known as the Office of Land Use and Climate Innovation [LCI]) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities. The advisory further recommended that the lead agency determine the significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The California Natural Resource Agency (CNRA) adopted the CEQA Guidelines amendments in December 2009, and the amended CEQA Guidelines became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis, or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider 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 GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply the lead agency's own thresholds of significance or those developed by other agencies or experts. CNRA acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.

With respect to GHG emissions, the CEQA Guidelines state that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions (14 CCR 15064.4[a]). The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (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 GHG emissions (14 CCR 15064.4[b]).

Executive Order S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs State agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the State's vulnerability, the report summarizes key climate change impacts to the State for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding

California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that the State government should take to build climate change resiliency.

State Regulations Related to Energy

The primary State regulatory agencies governing energy consumption are the CEC and the CPUC.

The CEC, created by the Legislature in 1974, has seven major responsibilities: forecasting future energy needs; promoting energy efficiency and conservation by setting the State's appliance and building energy efficiency standards; supporting energy research that advances energy science and technology through research, development, and demonstration projects; developing renewable energy resources; advancing alternative and renewable transportation fuels and technologies; certifying thermal power plants 50-MW and larger; and planning for and directing State response to energy emergencies.[30]

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC is responsible for ensuring that customers have safe, reliable utility service and infrastructure at reasonable rates, regulating utility services, stimulating innovation, and promoting competitive markets.[31]

The State has adopted various regulations aimed at reducing energy consumption, increasing energy efficiency, and mandating sourcing requirements for electricity production. The following regulations are applicable to the proposed project.

Building Energy

The following regulations relate to energy efficiency and energy use reductions in the built environment.

Title 24, Part 6

Title 24 of the CCR, which is known as the California Building Standards Code (CBSC), was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed periodically, and revised if necessary, by the Building Standards Commission and CEC (PRC Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). The regulations are scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402[b][2] and [b][3]). As a result, the standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

[30] California Energy Commission. *About the California Energy Commission*. Available at: http://www.energy.ca.gov/about. Accessed June 2025.
[31] California Public Utilities Commission. *California Public Utilities Commission*. Available at: https://www.cpuc.ca.gov/about-cpuc. Accessed June 2025.

The 2022 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2023. Compliance with the 2022 Title 24 Building Energy Efficiency Standards will reduce energy use and associated GHG emissions compared to structures built in compliance with the previous 2019 Title 24 standards.

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen, and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and State-owned buildings and schools and hospitals. The original CALGreen standards have been updated several times. The CALGreen 2022 standards, which are the current standards, improved upon the 2019 CALGreen standards, and went into effect on January 1, 2023. The 2022 CALGreen Code focuses on four key areas in newly constructed homes and businesses:[32]

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking and electric vehicle (EV) charging options whenever they choose to adopt those technologies.
- Expanding solar PV system and battery storage standards to make clean energy available onsite and complement the state's progress toward a 100 percent clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

The CALGreen standards also include voluntary efficiency measures that are provided at two tiers and implemented at the discretion of local agencies and applicants. According to Section A4.602 of Appendix A4 of the CALGreen Code, CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 65 percent diversion of construction and demolition waste, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 80 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

Title 20

Title 20 of the CCR requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters;

[32] California Energy Commission. *Energy Commision Adopts Updated Building Standards to Improve Effeciency, Reduce Emissions From Homes and Businesses.* August 11, 2021.

gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and State standards for federally regulated appliances, State standards for federally regulated appliances, and State standards for non-federally regulated appliances.

Senate Bill 1

SB 1 (Murray) (August 2006) established a $3 billion rebate program to support the goal of the State to install rooftop solar energy systems with a generation capacity of 3,000 MW through 2016. SB 1 added sections to the PRC, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for PV systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the State to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for homes and businesses within 10 years of adoption, and placing solar energy systems on 50 percent of new homes within 13 years of adoption. SB 1, also termed “Go Solar California,” was previously titled “Million Solar Roofs.”

Assembly Bill 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption by 50 percent for indoor residential lighting and by 25 percent for indoor commercial lighting.

Climate Change Scoping Plan

Expanding and strengthening existing energy efficiency programs as well as building and appliance standards is the key element of the Scoping Plan, as introduced above, related to building energy.

Transportation/Fuel Energy

The following regulations relate to fuel efficiency and energy use reductions in the transportation and motorized vehicle sector.

Assembly Bill 1493

In 2002 California adopted AB 1493, also known as the Pavley I standards, which required new passenger vehicles with model years 2009 to 2016 to meet more stringent fuel efficiency standards. Additional laws have extended these rules to cover vehicles from future model years.

Executive Order S-1-07

EO S-1-07, otherwise known as the LCFS, was adopted in 2009 and requires transportation fuels such as gasoline and diesel sold within the state to be less carbon intensive. These policies reduce emissions from on-road transportation and off-road equipment use in the City of Davis.

Executive Order B-16-12

EO B-16-12 (March 2012) required that State entities under the governor’s direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. The order directed

CARB, CEC, CPUC, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050. EO B-16-12 did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

Assembly Bill 1346

AB 1346 (October 2021) prohibits non-electric small off-road engines. Small off-road engines, which are used primarily in lawn and garden equipment, emit high levels of air pollutants and, in 2020, California daily criteria pollutant emissions from small off-road engines were higher than emissions from light-duty passenger cars. Thus, by January 1, 2024, regulations shall prohibit the engine exhaust and evaporative emissions from the sale of new small off-road engines.

Senate Bill 500

SB 500 (September 2021) requires that, beginning January 1, 2030, to the extent allowed by federal law, any autonomous vehicle that is model year 2031 or later, has a gross vehicle weight rating of less than 8,501 pounds, and is equipped with Level 3, 4, or 5 automation (as defined by the International Society of Automotive Engineers) to be a zero-emission vehicle to be operated on California public roads.

Climate Change Scoping Plan

The key elements of the Scoping Plan, as introduced above, related to transportation energy include the following:

1. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets; and
2. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the LCFS (17 CCR, Section 95480 et seq.).

Renewable Energy and Energy Procurement

The following regulation relates to the source of electricity provided to consumers within the State, as well as standards related to the generation of electricity within the State.

Renewable Portfolio Standard (RPS), Senate Bill 350, and Senate Bill 100

Established in 2002 under SB 1078, accelerated in 2006 under SB 107, and expanded in 2011 under SB 2, California's RPS is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020.

Since the inception of the RPS program, the program has been extended and enhanced multiple times. In 2015, SB 350 extended the State's RPS program by requiring that publicly owned utilities procure 50 percent of their electricity from renewable energy sources by 2030. The requirements of SB 350 were expanded and intensified in 2018 through the adoption of SB 100, which mandated that all electricity generated within the State by publicly owned utilities be generated through carbon-free sources by 2045. In addition, SB 100 increased the previous renewable

energy requirement for the year 2030 by 10 percent; thus, requiring that 60 percent of electricity generated by publicly owned utilities originate from renewable sources by the year 2030.

Local Regulations

The most prominent local regulations related to air quality, GHG emissions, and energy are established by the YSAQMD and the City of Davis, as discussed in further detail below.

YSAQMD

Various local, regional, State and federal agencies share the responsibility for air quality management in Yolo County. The YSAQMD operates at the local level with primary responsibility for attaining and maintaining the federal and State AAQS in Yolo County. The YSAQMD is tasked with implementing programs and regulations required by the FCAA and the CCAA, including preparing plans to attain federal and State AAQS. The YSAQMD works jointly with the USEPA, CARB, SACOG, other air districts in the region, county and city transportation and planning departments, and various non-governmental organizations to improve air quality through a variety of programs. Programs include the adoption of regulations, policies and guidance, extensive education and public outreach programs, as well as emissions reducing incentive programs.

YSAQMD CEQA Guidance

Nearly all development and mining projects in the region have the potential to generate air pollutants that may increase the difficulty of attaining federal and State AAQS. Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. In order to help public agencies evaluate air quality impacts, the YSAQMD has developed the Handbook for Assessing and Mitigating Air Quality Impacts.[33] The YSAQMD's handbook includes screening methodology and recommended thresholds of significance, including mass emission thresholds for construction-related and operational criteria pollutants. Although the YSAQMD's handbook includes emissions thresholds and analysis methodology for criteria pollutants, the YSAQMD has not yet established or adopted methodology or thresholds for the assessment of impacts related to GHG emissions.

YSAQMD Rules and Regulations

All projects under the jurisdiction of the YSAQMD are required to comply with all applicable YSAQMD rules and regulations. In addition, YSAQMD permit requirements apply to most industrial processes (e.g., manufacturing facilities, food processing), many commercial activities (e.g., print shops, drycleaners, gasoline stations), and other miscellaneous activities (e.g., demolition of buildings containing asbestos and aeration of contaminated soils). The YSAQMD regulations and rules include, but are not limited to, the following:

Regulation II – Prohibition, Exceptions - Requirements

Regulation II is comprised of prohibitory rules that are written to achieve emission reductions from specific source categories. The rules are applicable to existing sources as well as new sources. Examples of prohibitory rules include Rule 2.1 (Control of Emissions), Rule 2.28 (Cutback and Emulsified Asphalts), Rule 2.5 (Nuisance), Rule 2.11 (Particulate Matter Concentration), Rule 2.14 (Architectural Coatings), and Rule 2.40 (Wood Burning Appliances). Considering the relevance of Rule 2.5 and Rule 2.11 to the proposed activities, both rules are discussed in further depth below.

[33] Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts*. July 11, 2007.

Rule 2.5 – Nuisance

Rule 2.5 prohibits the discharge of sufficient quantities of air contaminants or other materials that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. The rule further protects the public from being subject to air contaminants and other materials that could endanger the comfort, repose, health, or safety of any persons, or could damage business or property.

Rule 2.11 – Particulate Matter Concentration

Rule 2.11 is intended to protect the ambient air quality within the YSAQMD's jurisdiction by establishing a standard for PM emissions. Per the definitions of Rule 2.11, PM is defined as any material that is emitted as a liquid or solid particles, or gaseous materials that becomes liquid or solid particles when collected at standard conditions. PM meeting the foregoing definition, shall not be released from any single source operation, dust, fumes, or other total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

Regulations III – Permit System

Regulation III is intended to provide an orderly procedure for the review of new sources, and modification and operation of existing sources, of air pollution through the issuance of permits. Regulation III primarily deals with permitting major emission sources and includes, but is not limited to, rules such as General Permit Requirements (Rule 3.1), Exemptions (Rule 3.2), Portable Equipment (Rule 3.3), New Source Review (Rule 3.4), Emission Reduction Credits (Rule 3.5), Emission Statements (Rule 3.7), and Toxics New Source Review (Rule 3.13).

Air Quality Attainment Plans

As a part of the SVAB federal ozone nonattainment area, the YSAQMD works with the other local air districts within the Sacramento area to develop a regional air quality management plan under the FCAA requirement. The currently applicable regional air quality management plan is called the SIP which describes and demonstrates how the Sacramento nonattainment area (in which the project site is located) would attain the required NAAQS by the proposed attainment deadline. In accordance with the requirements of the FCAA, the YSAQMD, along with the other air districts in the region, prepared the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Ozone Attainment Plan) in December 2008. The CARB determined that the Ozone Attainment Plan met FCAA requirements and approved the Plan on March 26, 2009 as a revision to the SIP. An update to the plan, *2017 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2017 Ozone Attainment Plan), was prepared and adopted by CARB on November 16, 2017. An additional update to the plan was prepared and adopted by CARB on October 15, 2018, and known as the *2018 Updates to the California State Implementation Plan.*

The Ozone Attainment Plan, and subsequent updates, demonstrate how existing and new control strategies would provide the necessary future emission reductions to meet the FCAA requirements, including the NAAQS. It should be noted that in addition to strengthening the 8-hour ozone NAAQS, the USEPA also strengthened the secondary 8-hour ozone NAAQS, making the secondary standard identical to the primary standard. The SVAB remains classified as a severe nonattainment area for ozone with an attainment deadline of 2027. On October 26, 2015, the USEPA released a final implementation rule for the revised NAAQS for ozone to address the requirements for reasonable further progress, modeling and attainment demonstrations, and reasonably available control measures (RACM) and reasonably available control technology

(RACT). The USEPA published designations for areas in attainment/unclassifiable for the 2015 ozone standards. The USEPA identified the entire Yolo County as nonattainment for the 2015 ozone standards.[34]

City of Davis

In addition to the City's General Plan goals and policies, the City of Davis has various strategies for improving the City's air quality by reducing GHG emissions, and energy demand. In 1999, Davis joined a small group of cities calling for local action and a national policy on climate change. In 2006, the City joined the U.S. Conference of Mayors Climate Protection Agreement that called for local and national action to reduce GHG emissions. In a follow-up action in spring 2007, the Davis City Council unanimously adopted a strategy to reduce the City's GHG emissions. Based on the City Council action, the City joined the *Cities for Climate Protection* (CCP) program along with hundreds of other communities across the globe to reduce GHG emissions at the local level. The program is designed to educate and empower local governments to take action on climate change. The CCP is a performance-oriented campaign that offers a framework for local governments to reduce GHG emissions and improve livability within their municipalities. As part of this effort, the City of Davis has undertaken various actions to reduce GHG emissions within the City of Davis, including the adoption of the City's CAAP, as well as adoption of local GHG reduction targets, carbon budgets, and carbon allowances for residential land uses.

On March 5, 2019, the Davis City Council adopted a resolution declaring a climate emergency, which proposed a regional mobilization effort to reduce the effects of climate change. As part of the regional mobilization effort, the resolution accelerated the City's previously stated goal of achieving carbon neutrality by the year 2050 to a new carbon neutrality target date of 2040.

The most prominent regulations related to air quality, GHG emissions, and energy established by the City of Davis are discussed in further detail below.

City of Davis General Plan

The City's General Plan includes the following applicable goals, performance objectives, and policies related to air quality, GHG emissions, and energy.

Air Quality Chapter

Goal AIR 1. Maintain and strive to improve air quality.

Policy AIR 1.1 Take appropriate measures to meet the AQMD's goal for improved air quality.

Transportation Chapter

Goal #2 The Davis transportation system will evolve to improve air quality, reduce carbon emissions, and improve public health by encouraging usage of clean, energy-efficient, active (i.e. human powered), and economically sustainable means of travel.

Performance Objective #2.1 Reduce carbon emissions from the transportation sector by 61 percent by 2035.

[34] U.S. Environmental Protection Agency. *California Final Area Designations for the 2015 Ozone National Ambient Air Quality Standards Technical Support Document.* June 3, 2018.

Performance Objective #2.2	Reduce vehicle miles traveled (VMT) 39 percent by 2035.
Policy TRANS 1.5	Strive for carbon-neutrality or better from the transportation component of new residential development.
Policy TRANS 1.6	Reduce carbon emissions from the transportation system in Davis by encouraging the use of non-motorized and low carbon transportation modes.
Policy TRANS 1.7	Promote the use of electric vehicles and other low-polluting vehicles, including Neighborhood Electric Vehicles (NEV).
Policy TRANS 1.8	Develop and maintain a work trip-reduction program designed to reduce carbon emissions, criteria pollutants, and local traffic congestion.
Policy TRANS 3.3	Require new development to be designed to maximize transit potential.
Policy TRANS 4.4	Provide pedestrian and bicycle amenities.
Policy TRANS 4.5	Establish and implement bicycle parking standards for new developments and significant redevelopment.

Energy Chapter

Goal ENERGY 1. Reduce per capita energy consumption in Davis.

Policy ENERGY 1.3	Promote the development and use of advanced energy technology and building materials in Davis.
Policy ENERGY 1.5	Encourage the development of energy-efficient subdivisions and buildings.

Davis Climate Action and Adaptation Plan

The City of Davis adopted the Davis 2020-2040 CAAP in April 2023.[35] The CAAP is designed to place the community on a path to achieve carbon neutrality by 2040.

The CAAP includes measurable GHG emissions reduction and climate change adaptation actions that align with the City's net neutrality goals. When implemented, the actions are anticipated to reduce GHG emissions by 37 percent below 2016 levels by 2030 and set the community on a trajectory toward the 2040 carbon neutrality goal. The CAAP actions are intended to prepare the community for climate change impacts, improve public safety, address environmental justice, and enhance the quality of life for residents. Each action achieves a plan goal, organized by sector, as follows: (1) Building Energy and Design; (2) Transportation and Land Use; (3) Water

[35] City of Davis. *Climate Action and Adaptation Plan*. April 18, 2023.

Conservation and Waste Reduction; (4) Climate Adaptation; and (5) Carbon Removal. The CAAP also aims to reduce energy demand by making buildings more efficient, and expanding local renewable energy development and storage.

The Davis CAAP serves as a Qualified GHG Reduction Strategy under Section 15183.5 of the CEQA Guidelines, simplifying development review for new projects that are consistent with the CAAP.

City of Davis Municipal Code

The following City of Davis Municipal Code sections would be applicable to the proposed project.

Section 8.01.060

Section 8.01.060 of the Davis Municipal Code includes updated requirements related to energy efficient water heating systems and undergrounding of all electrical and communication service laterals to any new building or structures.

Section 8.01.090

Section 8.01.090 of the Municipal Code requires mandatory compliance with Tier 1 standards of the CALGreen Code, which would otherwise be voluntary under the CBSC. According to Section A4.602 of Appendix A4 of the CALGreen Code, CALGreen's voluntary Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 65 percent diversion of construction and demolition waste, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs.

Section 8.01.100

In addition to all requirements of the California Energy Code applicable to new single-family dwellings and new low-rise multi-family dwellings,[36] Section 8.01.100 of the City of Davis Municipal Code requires that all mixed-fuel dwellings[37] comply with the following:

a) **New single-family dwellings.** New mixed-fuel, single-family dwellings shall be required to meet a Total Energy Design Rating (EDR) margin of 9.5 as defined by the 2022 California Energy Code. In addition, the electrical system design shall provide capacity for a future retrofit to facilitate the installation of all electric appliances. This includes capacity and space at the electrical service panel, prewiring and installed circuit breakers for the following appliances:
    1) Heat-pump water heater;
    2) Induction stove top and oven;
    3) Electric clothes dryer; and
    4) Heat-pump for code-required comfort heating.

b) **New low-rise multi-family dwellings.** New mixed-fuel, low-rise multi-family dwellings shall be required to meet a Total Energy Design Rating (EDR) margin of 10 as defined by the 2022 California Energy Code. In addition, the electrical system design shall provide capacity for a future retrofit to facilitate the installation of all electric appliances. This includes capacity and space at the electrical service panel, pre-wiring and installed circuit breakers for the following appliances:
    1) Heat-pump water heater (if applicable);

[36] For the purposes of CALGreen, low-rise multi-family is defined as residential buildings that include three stories or less.

[37] A "mixed-fuel dwelling" is a dwelling that uses natural gas or propane as fuel for space heating, water heating (including pools and spas), cooking appliances, or clothes drying appliances or is plumbed for such equipment.

2) Induction stove top and oven;
3) Electric clothes dryer (if applicable); and
4) Heat-pump for code-required comfort heating.

Section 8.01.110

In addition to all requirements of the CALGreen Code applicable to new non-residential and high-rise multi-family dwellings,[38] Section 8.01.110 of the City of Davis Municipal Code requires the following:

a) **New non-residential buildings.** New non-residential buildings shall comply with the Tier 1 (ten percent compliance margin) requirement for energy efficiency by employing energy efficiency measures. In addition, a PV system sized to offset a portion of the total building energy use based on TDV energy is required. The PV sizing shall be consistent with the methodology included in the cost effectiveness study provided by TRC. The PV sizing calculations were developed such that PV size would be the lessor of approximately eighty percent offset of the building's modeled annual electric load or fifteen DC watts per square feet of solar zone. The solar zone must have a total area of no less than fifteen percent of the total roof area in accordance with Section 9.3.1 of the 2016 Non-residential Compliance Manual.
b) **New high-rise multi-family dwellings.** New high-rise multi-family dwellings shall comply with the Tier 1 (ten percent compliance margin) requirement for energy efficiency by employing energy efficiency measures. In addition, a PV system sized to offset a portion of the total building energy use based on TDV energy is required. The PV sizing calculations were developed such that PV size would be the lessor of approximately eighty percent offset of the building's modeled annual electric load or fifteen DC watts per square feet of solar zone. The solar zone must have a total area of no less than fifteen percent of the total roof area in accordance with Section 9.3.1 of the 2016 Non-residential Compliance Manual.
c) New non-residential and high-rise multi-family buildings shall incorporate EV charging stations as determined by Tables 1 and 2 (see Table 4.3-6 and Table 4.3-7). Each EV charging station installed shall be credited toward the CALGreen Code requirement for charging spaces.

Table 4.3-6
Non-Residential EV Charging Station Standards

Non-Residential Land Use Category	Required Parking Spaces	EV Chargers	Land Use (from City Parking Code; City Code Section 40.25.090)
Retail	0-10	0	1. Automobile or machinery sales and service garages. 2. Banks, post offices, business and professional offices. 3. Furniture and appliance stores, household equipment or furniture repair shop. 4. Launderettes. 5. Restaurants, beer parlors, nightclubs, and cardrooms. 6. Retail stores, shops, etc. 7. Rooming and lodging houses. 8. Shopping center, neighborhood.
	11-51	1	
	52-102	2	

(Continues on next page)

[38] For the purposes of CALGreen, high-rise multi-family is defined as residential buildings that include four stories or greater.

Table 4.3-6
Non-Residential EV Charging Station Standards

Non-Residential Land Use Category	Required Parking Spaces	EV Chargers	Land Use (from City Parking Code; City Code Section 40.25.090)
	Every Additional 50	+1	9. Shopping center, community. 10. Land uses where up to 50% of spaces serving employees.
Non-Retail	0-10	0	1. Group care homes. 2. Hospitals. 3. Hotels and motor hotels, motels. 4. Manufacturing plants, research or testing laboratories and bottling plants. 5. Medical or dental clinics. 6. Rest home, sanatorium, convalescent home or hospital. 7. Wholesale establishments, warehouses. 8. Land uses where more than 50% of spaces serving employees.
	11-26	1	
	27-42	2	
	Every Additional 15	+1	
Destination	0-10	0	1. Bowling alleys. 2. Churches, schools, day care centers and nursery schools. 3. Dance halls and assembly halls without fixed seats, exhibition halls except assembly rooms in conjunction with auditorium. 4. Funeral home, mortuaries. 5. Sports arenas auditoriums, theaters, assembly halls.
	11-36	1	
	37-62	2	
	Every Additional 25	+1	

Notes:

(1) All other non-modified Tier 1 standards for nonresidential EV charging apply.
(2) All required charging is Level 2 with the exception of non-retail (workplace) charging which can be satisfied by fifty percent Level 1 chargers with fifty percent payment-ready Level 2 chargers due to longer dwell times. Note: calculations for total number of chargers shall be rounded up and rounding shall favor Level 2 chargers.
(3) The first two chargers placed at non-retail (workplace) locations must be payment-ready Level 2 with subsequent chargers optionally Level 1.
(4) Fifty percent of required non-retail (workplace) chargers to be installed prior to issuance of certificate of occupancy if approved prior to January 1, 2020. Remaining required chargers do not have to be installed at time of construction but must be pre-wired and have adequate electrical panel capacity for each future charger. After January 1, 2020, all required chargers must be fully installed.
(5) Chargers should be placed to serve multiple parking spaces – see design recommendations in Section 5 of the City of Davis EV Charging Plan.
(6) EV charging parking spaces shall be included in the required number of parking spaces per Article 40.25 of the City of Davis Zoning Ordinance. If space is available in a parking lot, additional EV charging spaces may be installed beyond the minimum number required subject to review and approval by the department of community development and sustainability.
(7) Conversion of existing parking spaces for EV charging purposes shall be reviewed and approved by the director of community development to assure a balance between full-size parking spaces, compact parking spaces and parking spaces for persons with disabilities.

Table 4.3-7
Residential EV Charging Station Standards

Development Type	Tier 1 Modifications	Notes
Single-Family (1-3 units)	1. Single-family residential development required to pre-install 8-gauge wiring plus reserve room in electrical panel necessary to support Level 2 electric vehicle charging.	1. Addresses key barrier for adding Level 2 home EV charger.
Muti-Family (4 or more units)	1. Multi-family residential development projects are required to provide: (1) Level 1 charging at 5% of all required parking spaces with a minimum of 2 parking spaces served; (2) Level 2 charging at 1% of all required parking spaces where more than 20 parking spaces are required with a minimum of 1 parking space served; (3) conduit adequate for Level 2 charging to serve or reasonably be extended in the future to 25% of all parking spaces; and (4) room in panel(s) and capacity to serve 20% of all parking spaces with Level 1 charging and 5% of all parking spaces with Level 2 charging. Notes: (1) properly located, a single charger can serve multiple parking spaces; (2) reasonable future extension of conduit would not include the removal or trenching of hardscaped surfaces or areas where mature trees would be expected to establish (e.g., pavement, tree wells, etc.).	2. Addresses key barrier for EV use in residential rental settings.

Notes:

(1) All other non-modified Tier 1 standards for residential EV charging apply.
(2) Chargers in multi-family residential settings should be placed to serve multiple parking spaces – see design recommendations in Section 5 of the City of Davis EV Charging Plan.
(3) Level 1 in the context above is defined as a 20A 120V circuit and Level 2 is defined as a 40A 208V/240V circuit.
(4) Level 1 is defined as a 120V hardwired EVSE not a household outlet.
(5) Monitoring equipment to properly charge tenants is encouraged at multi-family locations.

4.3.4 IMPACTS AND MITIGATION MEASURES

The standards of significance and methodology used to analyze and determine the potential impacts related to air quality, GHG emissions, and energy are described below. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact related to air quality, GHG emissions, or energy would occur if the proposed project would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State AAQS;
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;

- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs;
- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources; or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Pursuant to CEQA Guidelines Section 15064.4(b)(2), the lead agency is charged with determining a threshold of significance that is applicable to the project.

For the analysis within this EIR, the City has elected to use the YSAQMD's thresholds of significance, as well as the City of Davis adopted goal of net carbon neutrality by the year 2040, as set forth in the City's CAAP. The analysis in this EIR uses the thresholds for criteria pollutants, localized CO, TAC emissions, and GHG emissions, as discussed below.

Criteria Pollutant Emissions

The YSAQMD significance thresholds for emissions of ROG, NO_X, and PM_{10} are presented in Table 4.3-8 below and are expressed in maximum tons per year (tons/yr) for ROG and NO_X and maximum pounds per day (lbs/day) for PM_{10}. If the proposed project's emissions exceed the pollutant thresholds presented in Table 4.3-8, the project could have a significant effect on air quality, the attainment of federal and State AAQS, and could conflict with or obstruct implementation of the applicable air quality plan.

Table 4.3-8
YSAQMD Thresholds of Significance

Pollutant	Construction Threshold	Operational/Cumulative Threshold
ROG	10 tons/yr	10 tons/yr
NO_X	10 tons/yr	10 tons/yr
PM_{10}	80 lbs/day	80 lbs/day

Source: YSAQMD. Handbook for Assessing and Mitigating Air Quality Impacts. July 11, 2007.

With regard to cumulative emissions of criteria air pollutants, according to the YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts, any project that would individually have a significant air quality impact (i.e., exceed the project level thresholds presented in Table 4.3-8) would also be considered to have a significant cumulative impact.[39] As a result, the cumulative-level emissions thresholds established by YSAQMD are assumed to be identical to the project-level emissions thresholds presented in Table 4.3-8, above.

Ascertaining cancer risk, or similar measurements of health effects from air pollutants, is very difficult for regional pollutants such as the ozone precursors ROG and NO_X. This challenge was addressed in Sierra Club v. County of Fresno (2018) 6 Cal.5th 502, 510, 517-522. In that case, the California Supreme Court held generally that an EIR should "make 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." 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. Thus, the court

[39] Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts*. July 11, 2007.

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."

Here, the YSAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of emissions in Yolo County. At present, the YSAQMD 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.

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 possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the USEPA, the air districts prepare air quality management plans that detail regional programs to attain the AAQS. However, if a project within the YSAQMD exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SVAB.

Notably, during the litigation process that led to the California Supreme Court decision in *Sierra Club v. County of Fresno*, the San Joaquin Valley Air Pollution Control District (SJVAPCD) submitted an amicus curiae brief that provided scientific context and expert opinion regarding the feasibility of performing regional dispersion modeling for ozone. In the brief, SJVAPCD states that "CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible." As SJVAPCD explains:

> Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period. Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District's tools and plans for attaining the NAAQS are regional in nature.
>
> For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs) and the atmospheric chemistry and meteorology of the Valley. At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor emissions Valley wide. Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.
>
> The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.
> Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SJVAB] can accommodate

> without affecting the attainment date for the NAAQS. The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources must "offset" their emissions…Thus, the CEQA air quality analysis for criteria air pollutants is not really a localized, project-level impact analysis but one of regional cumulative impacts.

The brief explains that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with a project's regional pollutant emissions could be identified. Rather, CEQA thresholds of significance are used to determine whether a project's emissions would obstruct a region's capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by CARB and USEPA. This sentiment is corroborated in an additional brief submitted by the South Coast Air Quality Management District. Based on the expert analyses submitted by these leading air districts, the City has concluded that it is not scientifically feasible to predict in a meaningful manner how mass emissions of pollutants of regional concern (e.g., ozone precursors) from a project of the size of the proposed project could lead to specific public health consequences, changes in pollutant concentrations, or changes in the number of days for which the SVAB will be in nonattainment for regional pollutants.

Localized CO Emissions

The YSAQMD recommends the use of screening thresholds to assess a project's potential to create an impact through the creation of CO hotspots. A violation of the CO standard could occur if either of the following criteria is true of any street or intersection affected by the mitigated project:[40]

- The project would reduce peak-hour level of service (LOS) on one or more streets or at one or more intersections to an unacceptable LOS (typically LOS E or F); or
- The project would increase a traffic delay by 10 or more seconds on one or more streets or at one or more intersections in the project vicinity where a peak hour LOS of F currently exists.

However, considering that the law has changed with respect to how transportation-related impacts may be addressed under CEQA such that unacceptable LOS is no longer considered a significant impact on the environment under CEQA, the analysis herein related to localized CO emissions uses guidance from the nearby Sacramento Metropolitan Air Quality Management District (SMAQMD) and Placer County Air Pollution Control District (PCAPCD). According to the SMAQMD's CEQA Guide,[41] emissions of CO are generally of less concern than other criteria pollutants, as operational activities are not likely to generate substantial quantities of CO, and the SVAB has been in attainment for CO for multiple years. Thus, SMAQMD no longer recommends an analysis of localized CO emissions. The PCAPCD, which has jurisdiction over a portion of the SVAB, has a screening level for localized CO impacts. According to the PCAPCD screening level, a project could result in a significant impact if the project would result in CO emissions from vehicle operations in excess of 550 lbs/day.[42] This EIR will use the PCAPCD's threshold of 550 lbs/day for the purpose of evaluating localized CO impacts.

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40 Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts* [p. 21]. July 11, 2007.
41 Sacramento Metropolitan Air Quality Management District. *CEQA Guide*. April 2020.
42 Placer County Air Pollution Control District. *CEQA Air Quality Handbook*. November 21, 2017.

TAC Emissions

For TAC emissions, if a project would introduce a new source of TAC or a new sensitive receptor near an existing source of TAC that would not meet the CARB's minimum recommended setback, a detailed health risk assessment may be required. As such, in addition to the thresholds of significance presented above for criteria air pollutants, YSAQMD has also developed thresholds for potential exposure of the public to TACs from new stationary sources. Exposure of the public to TACs from new stationary sources in excess of the following thresholds would be considered a significant impact:

- Probability of contracting cancer for the Maximally Exposed Individual (MEI) equals 10 in one million or more; and
- Ground-level concentrations of non-carcinogenic TACs would result in a Hazard Index equal to 1.0 for the MEI or greater.

Although the YSAQMD has established thresholds for exposure to TACs from new stationary sources, a threshold for exposure of the public to mobile TAC emissions, such as emissions associated with DPM from heavy-duty diesel trucks or off-road construction equipment, does not currently exist. In the absence of a specified threshold for assessing impacts of mobile sources of TACs on a sensitive land use, the industry standard is to use the stationary source threshold of an increase in cancer risk of 10 in one million and a Hazard Index greater than one, which is the standard that has been used throughout the State for similar health risk analyses.

GHG Emissions

With respect to establishing significance thresholds for GHG emissions, CEQA Guidelines Section 15064.4 states:

> (a) The determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project.
> (b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:
> (1) The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
> (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
> (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 GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must 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.

Thus, one threshold that is commonly used to analyze a project's GHG emissions is whether the project would conflict with or obstruct the goals, strategies, or governing regulation (Health & Safety Code, Section 38500-38599) of the California Global Warming Solutions Act of 2006 (AB 32) and the GHG reduction targets in SB 32.

The YSAQMD, in their Handbook for Assessing and Mitigating Air Quality Impacts, acknowledges that new emissions generated by development projects could potentially conflict with existing GHG emissions reductions targets, and, thus, a need for development of GHG emissions thresholds exists. However, the YSAQMD has not yet established or adopted any GHG emissions thresholds. The YSAQMD is currently recommending GHG analysis consistent with the SMAQMD adopted thresholds of significance. While SMAQMD recognizes that emissions from a single project cannot be determined to substantially impact overall GHG emissions levels in the atmosphere, an emissions threshold is useful to trigger further project review and assess mitigation. As such, SMAQMD has developed thresholds for project construction and operational GHG emissions that allow for review of proposed projects to ensure consistency with the emissions-reduction goals of AB 32, SB 32, the Scoping Plan, and relevant executive orders. Although SMAQMD has developed thresholds for project CEQA review, SMAQMD further specified that where cities have adopted city-specific climate action plans or GHG reduction plans, proposed projects should be assessed in relation to those city-specific plans, rather than SMAQMD's thresholds. As discussed in further depth below, the City of Davis has adopted a CAAP, which is considered the relevant GHG reduction program for operational GHG emissions of existing and proposed developments within the City.

The 2020 Yolo County Regional GHG Emissions Inventory Update for the Cities of Davis, Winters and Woodland – Draft Technical Memorandum (2020 GHG Emissions Inventory), includes an estimation of citywide 2016 emissions levels, which were used as the basis for the City of Davis citywide GHG reduction target thresholds.[43] The emissions reductions targets provide a desired rate of reduction, which are more ambitious than the State's most recent target set in EO B-55-18, and include achievement of citywide carbon neutrality by 2040.

The CAAP includes measurable GHG emissions reduction and climate change adaptation actions that align with the City's net neutrality goals. When implemented, the actions are anticipated to reduce GHG emissions within the City by 37 percent below 2016 levels by 2030 and set the community on a trajectory toward the 2040 carbon neutrality goal. As such, projects that were considered within the 2020 GHG Emissions Inventory can be addressed through the CAAP GHG emissions reduction and climate change adaptation actions.

The proposed project would require an Amendment of the City's Sphere of Influence (SOI), Annexation of the project site into the City of Davis, a General Plan Amendment, Pre-zoning of the project site to City of Davis zoning designations, Large Lot and Small Lot Tentative Maps, and a Development Agreement. As such, the proposed project was not considered within the 2020 GHG Inventory. In order to maintain the emissions reductions trajectory anticipated by the CAAP and mandated by the City's climate emergency declaration, the proposed project would be required to demonstrate that operations would not exceed existing emissions levels associated with the project site. Should the proposed project result in increased on-site emissions relative to existing levels, the project would be responsible for reducing post-project emissions to a level equal to the existing level of emissions. By ensuring that emissions from the proposed project remain at or below existing levels, the project would provide a proportionate share of emissions reductions and would not inhibit attainment of citywide net carbon neutrality by the year 2040, nor would the project conflict with the City's CAAP.

[43] Yolo County Department of Community Services. *Yolo County Regional Greenhouse Gas Emissions Inventory Update for the Cities of Davis, Winters and Woodland – Draft Technical Memorandum*. April 30, 2020.

A downward trajectory to carbon neutrality could be achieved through various means. For instance, design features could be incorporated into the project design to reduce operational emissions. Design features could include natural ventilation systems to reduce energy use or all electric appliances to reduce the consumption of natural gas on-site. The project applicant would be able to demonstrate the on-site emissions reductions achieved through design features, which would continue to reduce emissions throughout the lifespan of the project. Should project design features be insufficient to reduce emissions on-site, the project applicant would be required to show off-site reductions sufficient to meet reduction requirements for net carbon neutrality by 2040. Off-site measures could be implemented within the City of Davis, for instance through funding of tree-planting programs, or through the purchase of off-set credits through CARB or YSAQMD verified off-set programs. Furthermore, the project applicant could participate in any future off-set programs established by the City. Should project emissions be shown to achieve a downward trajectory from the anticipated emissions level to carbon neutrality (zero $MTCO_2e$/yr) by the year 2040, project operations would be considered in compliance with the City's adopted GHG emissions reduction goal and the City's CAAP.

Therefore, the proposed project would be considered to conflict with the City's GHG reduction targets, if the project would result in net positive operational GHG emissions by the year 2040. Conformance with the City's goal of net carbon neutrality by 2040 would also demonstrate compliance with the City's CAAP and consistency with the statewide reduction targets of AB 32 and SB 32.

Although the City has adopted clear GHG reductions goals, which the City has elected to use as operational thresholds for the proposed project in this EIR, the City has not specifically adopted goals or thresholds to analyze GHG emissions associated with construction of proposed projects. As discussed above, the YSAQMD is currently recommending GHG analysis consistent with the SMAQMD adopted thresholds of significance. For construction-related GHG emissions, the SMAQMD has adopted a threshold of significance of 1,100 $MTCO_2e$/yr. As such, if construction of the proposed project would result in emissions that exceed 1,100 $MTCO_2e$/yr, then construction of the proposed project could be considered to result in a potentially significant impact and mitigation measures would be required.

Energy

Quantitative thresholds for the analysis of potential impacts related to energy consumption have not been adopted by any local, regional, or statewide entities. Consequently, potential impacts of the project related to energy will be determined based on whether the project would result in wasteful, inefficient, or unnecessary use of energy. In addition, the potential for the project to conflict with or obstruct a State or local plan for renewable energy generation or energy efficiency is considered. The analysis of energy consumption includes consideration of energy demand during both construction and operations of the proposed project.

Method of Analysis

A comparison of project-related emissions to the thresholds discussed above shall determine the significance of the potential impacts to air quality and climate change resulting from the proposed project. Emissions attributable to the proposed project which exceed the significance thresholds could have a significant effect on regional air quality and the attainment of the federal and State AAQS, global climate change, and energy. Where potentially significant impacts are identified, mitigation measures are described that would reduce or eliminate the impact.

The analysis protocol and guidance provided by the YSAQMD's Handbook for Assessing and Mitigating Air Quality Impacts was used to analyze the proposed project's air quality impacts, including screening criteria and pollutant thresholds of significance. Details regarding the methodology and assumptions used for the proposed project's air quality and GHG impact analysis are provided below.

Construction Emissions

The proposed project's short-term construction emissions were estimated using the CalEEMod version 2022.1.1.30 web-based software, which is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix (i.e., the proportion of diesel, gasoline, electric, natural gas, and plug-in hybrid vehicle types), trip length, average speed, etc. However, where project-specific data was available, such data was input into the model. Additionally, the modeling was conducted for the construction of the whole project.

Accordingly, the construction modeling for the proposed project assumed the following:

- Construction would commence in April of 2027 and would occur over an approximately eight-year period;
- The site preparation, grading, paving, and building construction phase timing was adjusted based on project-specific information provided by CBG Engineering;
- Based on typical construction practices, the architectural coating phase of construction was assumed to begin two weeks after the commencement of the building construction phase and occur over a similar number of days;
- The number of anticipated pieces of construction equipment was increased during the grading phase to account for the on-site material movement, which according to CBG Engineering is estimated to be 400,000 cubic yards (CY). Off-site material movement would not occur, as the site would balance.

The results of the construction emissions modeling were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results are included in Appendix G to this EIR.

Operational Emissions

Operational emissions associated with the proposed project were estimated using CalEEMod. Based on the construction information provided by the project engineer, the proposed project is anticipated to be fully operational by 2035. The project-specific trip generation and VMT data provided by Fehr & Peers for full buildout of the proposed project was applied to the project modeling.[44] In addition, as discussed in Chapter 3, Project Description, of this EIR, the project applicant has committed to the prohibition of natural gas for all residential uses on site. As such, the modeling assumes that the residential portion of the proposed project would be built all-electric. However, the project applicant has committed to no natural gas for all project components, thus the modeling would provide a conservative analysis of the proposed project. Additionally, as further discussed in the Project Description chapter of this EIR, a total of

[44] Fehr & Peers. *Willowgrove Project Transportation Impact Study*. May 2025.

4,250,000 kWh per year of renewable energy would be generated by the proposed residential rooftop solar.

Finally, the modeling accounted for both the loss of carbon sequestration associated with converting the site from cropland to urban uses, as well as the carbon sequestration that would occur after site development as a result of the landscaping trees proposed to be planted on-site. It should be noted that while GHG emissions are also currently emitted on-site associated with land maintenance and harvesting equipment, such emissions were omitted from this analysis to provide a conservative, worst-case scenario.

The results of emissions estimations were compared to the standards of significance discussed above in order to determine the associated level of impact. All CalEEMod modeling results are included in Appendix G to this EIR.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above. GHG emissions are inherently cumulative; thus, the discussion of GHG impacts is included under the Cumulative Impacts and Mitigation Measures section below.

4.3-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction. Based on the analysis below, the impact is *less than significant*.

During construction of the proposed project, various types of equipment and vehicles would temporarily operate on the project site. Construction-related emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate emissions of criteria air pollutants, including ROG, NO_X, and PM_{10}, intermittently within the site and in the vicinity of the site, until all construction has been completed, construction is a potential concern, as the proposed project is located in a nonattainment area for ozone and PM.

The maximum unmitigated construction emissions associated with construction of the proposed project and have been estimated using CalEEMod and are presented in Table 4.3-9. The construction modeling assumptions are described in the Method of Analysis section above.

Table 4.3-9
Maximum Unmitigated Construction-Related Emissions

	ROG	NO_X	PM_{10}
Project Emissions	1.82 tons/yr	3.06 tons/yr	21.00 lbs/day
YSAQMD Threshold of Significance	*10.00 tons/yr*	*10.00 tons/yr*	*80.00 lbs/day*
Exceeds Threshold?	**NO**	**NO**	**NO**

Source: CalEEMod, October 2025 (see Appendix G).

As shown in the table, the proposed project's maximum short-term construction-related emissions would be below the applicable YSAQMD thresholds of significance. Therefore, construction-related emissions resulting from implementation of the proposed project would not result in a contribution to the region's nonattainment status of ozone or PM and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.

The project applicant has committed to Tier 4 Final engine off-road equipment during the construction of the proposed project. However, the proposed project was modeled without the inclusion of Tier 4 Final engines to provide a conservative, worst-case emissions scenario. Additionally, the use of Tier 4 Final engines would result in further reductions than the maximum unmitigated construction emissions, as presented in Table 4.3-10 below.

Table 4.3-10
Maximum Construction-Related Emissions with Use of Tier 4 Final Engines

	ROG	NO_X	PM_{10}
Project Emissions	1.73 tons/yr	1.20 tons/yr	19.9 lbs/day
YSAQMD Threshold of Significance	*10.00 tons/yr*	*10.00 tons/yr*	*80.00 lbs/day*
Exceeds Threshold?	**NO**	**NO**	**NO**

Source: CalEEMod, October 2025 (see Appendix G).

In addition, while all projects within the YSAQMD, including the proposed project, are required to comply with all YSAQMD rules and regulations for construction, including Rule 2.1 (Control of Emissions), Rule 2.28 (Cutback and Emulsified Asphalts), Rule 2.5 (Nuisance), Rule 2.14 (Architectural Coatings), and Rule 2.11 (Particulate Matter Concentration), the proposed project was modeled without the inclusion of such rules and regulations to provide a conservative, worst-case emissions scenario. Even under the conservative assumptions used for this analysis, emissions of PM_{10} would remain below the YSAQMD's thresholds of significance.

According to YSAQMD Guidance, even projects not exceeding the YSAQMD construction-related PM thresholds should implement best management practices to reduce dust emissions and avoid localized health impacts. The YSAQMD's best management practices for dust include, but are not necessarily limited to, the following:

- Watering of all active construction sites at least twice daily;
- Maintenance of at least two feet of freeboard in haul trucks;
- Covering of all trucks hauling dirt, sand, or loose materials;
- Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeding of area, as applicable and/or necessary;
- Application of chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days), as applicable and/or necessary;
- Planting of vegetative ground cover in disturbed areas as soon as possible;
- Covering of inactive storage piles;
- Sweeping of streets if visible soil material is carried out from the construction site; and

- Treatment of accesses to distance of 100 feet from the paved road with a six- to 12-inch layer of wood chips, mulch, or gravel.

Compliance with the aforementioned rules and regulations related to construction, as well as implementation of best management practices for dust, would help to minimize emissions generated during construction activities.

Conclusion

Because implementation of the proposed project would result in construction-related emissions below the applicable thresholds of significance and would comply with applicable YSAQMD rules, regulations, and best management practices for dust, construction activities associated with development of the proposed project would result in a ***less-than-significant*** impact.

Mitigation Measure(s)

None required.

4.3-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation. Based on the analysis below, even with implementation of mitigation, the impact is *significant and unavoidable*.

Due to the nonattainment designations of the area, the YSAQMD has developed plans to attain the State and federal standards for ozone and PM. The currently applicable air quality plan is the Ozone Attainment Plan. Adopted YSAQMD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with the applicable air quality plan. Thus, if a project's operational emissions exceed the YSAQMD's mass emissions thresholds for operational emissions of ROG, NO_X, or PM_{10}, a project would be considered to conflict with or obstruct implementation of the YSAQMD's air quality planning efforts.

Emissions of ROG, NO_X, and PM_{10} would be generated during operations of the proposed project from stationary sources such as architectural coatings, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, detergents, hair spray, cleaning products, spray paint, insecticides, floor finishes, polishes, etc.). In addition, a significant source of emissions related to the proposed project would be from mobile sources. As discussed in the Method of Analysis section above, to capture the potential emissions related to mobile sources from the proposed project, the project-specific trip generation rates and VMT estimates prepared by Fehr & Peers were applied to the project modeling.

The maximum unmitigated operational emissions for the proposed project have been estimated using CalEEMod and are presented in Table 4.3-11. The operational modeling assumptions are described in the Method of Analysis section above. As shown in the table, the proposed project's maximum unmitigated operational emissions of NO_X and PM_{10} would be below the applicable YSAQMD threshold of

significance. However, the proposed project's maximum unmitigated operational emissions of ROG would exceed the applicable YSAQMD thresholds of significance. Accordingly, the proposed project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Table 4.3-11
Maximum Unmitigated Operational Emissions

	ROG	NO_X	PM_{10}
Project Emissions	14.5 tons/yr	4.47 tons/yr	54.6 lbs/day
YSAQMD Significance Threshold	*10.00 tons/yr*	*10.00 tons/yr*	*80.00 lbs/day*
Exceeds Threshold?	**YES**	**NO**	**NO**

Source: CalEEMod, October 2025 (see Appendix G).

Conclusion

Based on the above, operation of the proposed project could violate an air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, the proposed project would be considered to result in a ***significant*** impact related to air quality.

Mitigation Measure(s)

The majority of the operational ROG emissions are associated with area sources (9.28 tons/yr), which are largely from consumer products, and mobile sources (5.30 tons/yr).

Implementation of Mitigation Measure 4.3-2 would reduce the operational area source emissions associated with the proposed project through the use of zero-VOC paints, finishes, adhesives, and cleaning supplies as shown in Table 4.3-12. However, as shown in the table, even with implementation of Mitigation Measure 4.3-2, the proposed project's operational ROG emissions would continue to exceed the applicable threshold of significance.

Table 4.3-12
Maximum Mitigated Operational Emissions

	ROG	NO_X	PM_{10}
Project Emissions	13.8 tons/yr	4.47 tons/yr	54.6 lbs/day
YSAQMD Significance Threshold	*10.00 tons/yr*	*10.00 tons/yr*	*80.00 lbs/day*
Exceeds Threshold?	**YES**	**NO**	**NO**

Source: CalEEMod, October 2025 (see Appendix G).

Possible additional mitigation measures for further reducing consumer product emissions could include limitations on consumer products at the site (e.g., amounts, types, etc.); however, such mitigation cannot be feasibly enforced or verified. The sale, manufacturing, substance control, and content limitation (such as VOC limits) of consumer products are regulated by federal, State, and/or local government agencies. The YSAQMD is charged with local enforcement of regulations regarding consumer products that are associated with effects on air quality. The YSAQMD is also charged with developing measures to offset potential effects on regional air quality through their planning efforts. For example, the regional Ozone Attainment Plan includes existing and new control strategies intended to provide the necessary future emission reductions to meet the ozone NAAQS. Because the proposed project has not been

anticipated by the City's General Plan, the associated emissions have not been anticipated in the regional air quality plans. As such, any future updates to the air quality plans would have to take into account the emissions associated with buildout of the proposed project (if approved) and include additional strategies to offset the overall regional emissions of ozone, including ROG emissions, through local and/or regional programs.

With regard to mobile source emissions, implementation of Mitigation Measure 4.13-4 as set forth in the Transportation chapter of this EIR, which requires implementation of Transportation Demand Management (TDM) strategies to reduce the number of vehicle trips that would be generated by the residential component of the proposed project, would further reduce the proposed project's operational mobile source ROG emissions. However, as discussed therein, existing evidence indicates that the effectiveness of the TDM strategies with regards to vehicle trip reduction can vary based on a variety of factors, including the context of the surrounding built environment (e.g., urban versus suburban) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site specific, but also rely on implementation and/or adoption by private entities (e.g., transit providers, Home Owners Association [HOA], etc.). Thus, the effectiveness of the TDM strategies set forth within Mitigation Measure 4.13-4 cannot be quantified at this time and subsequent vehicle trip reduction effects cannot be guaranteed.

Furthermore, the proposed project's inherent site and/or design features that would contribute to a reduction in vehicle trips and VMT, such as site enhancements and features that encourage alternative modes of transportation, which subsequently result in a reduction in mobile source emissions of criteria pollutants, including ROG, have already been accounted for in the project-specific VMT applied in the modeling. Additional measures for the reduction of mobile source emissions (beyond the proposed project's inherent site and/or design features and the measures included in Mitigation Measure 4.13-4), sufficient to reduce emissions of ROG to below the applicable thresholds of significance, are not available, nor feasible for the proposed project at this time.

Therefore, even with the implementation of feasible mitigation measures, the proposed project's operational ROG emissions would remain *significant and unavoidable*.

4.3-2 *Prior to the issuance of building permits, the project applicant shall ensure that only zero-VOC paints, finishes, adhesives, and cleaning supplies shall be used in the initial construction of all buildings on the project site.*

In addition, verification that only zero-VOC paints, finishes, adhesives, and cleaning supplies are used during operation of the affordable housing components of the proposed project shall be ensured in perpetuity by the project's proposed homeowner's association (HOA).

For components of the proposed project not subject to an HOA, a zero-VOC paints, finishes, adhesives, and green cleaning products

education program shall be made available to all residents and commercial tenants of the proposed project. The program shall include free educational materials such as brochures, pamphlets, checklists, etc., that provide information regarding the proper use of zero-VOC paints, finishes, adhesives, and green cleaning products.

The aforementioned requirements shall be noted on the project improvement plans and the informational sheet filed with the final subdivision map(s), and shall be provided to the City of Davis Community Development Department for review and approval prior to approval of improvement plans for each small lot tentative map.

4.3-3 Expose sensitive receptors to substantial pollutant concentrations. Based on the analysis below, the impact is *less than significant*.

The major pollutant concentrations of concern are localized CO emissions, TAC emissions, and criteria pollutant emissions, which are addressed below.

Localized CO Emissions

The following includes a discussion of impacts related to localized CO emissions associated with the proposed project.

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Concentrations of CO approaching the AAQS are only expected where background levels are high, and traffic volumes and congestion levels are high. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the proposed project would be expected to increase local CO concentrations.

As discussed in the Method of Analysis section above, considering that the law has changed with respect to how transportation-related impacts may be addressed under CEQA such that unacceptable LOS is no longer considered a significant impact on the environment under CEQA, the analysis herein uses guidance from the nearby SMAQMD and PCAPCD. According to the SMAQMD's CEQA Guidelines, emissions of CO are generally of less concern than other criteria pollutants, as operational activities are not likely to generate substantial quantities of CO, and the SVAB has been in attainment for CO for multiple years. Additionally, the PCAPCD, which has jurisdiction over a portion of the SVAB, has a screening level for localized CO impacts. According to the PCAPCD screening levels, a project could result in a significant impact if the project would result in CO emissions from vehicle operations in excess of 550 lbs/day.

According to the modeling performed for the proposed project, operation of the proposed project would result in maximum unmitigated mobile source CO emissions of 236 lbs/day, (see Appendix G). Consequently, CO emissions related to mobile sources associated with operation of the proposed project would be below the 550 lbs/day screening threshold used by PCAPCD. Therefore, according to the PCAPCD's screening methodology for localized CO emissions, the proposed project would not be

expected to generate localized CO emissions that would contribute to an exceedance of AAQS, and the proposed project would not expose sensitive receptors to substantial concentrations of localized CO.

TAC Emissions

Another category of environmental concern is TACs. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. The CARB's Handbook provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, GDFs, chrome plating operations, distribution centers, and rail yards. The CARB has identified DPM from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The proposed land uses would not involve long-term or frequent operations of any stationary diesel engines and would not involve heavy truck traffic or idling. Thus, the proposed project would not expose sensitive receptors to substantial concentrations of DPM during operations.

Construction-related activities have the potential to generate concentrations of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. The construction period would be temporary and would occur over a relatively short duration in comparison to the operational lifetime of the proposed project. While methodologies for conducting health risk assessments are associated with long-term exposure periods (e.g., over a 30-year period or longer), construction activities associated with the proposed project were estimated to occur over an approximately eight-year period. In addition, only portions of the site would be disturbed at a time throughout the construction period, with operation of construction equipment occurring intermittently throughout the course of a day, rather than continuously at any one location on the project site.

All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation includes emissions reducing requirements such as limitations on vehicle idling, disclosure, reporting, and labeling requirements for existing vehicles, as well as standards relating to fleet average emissions and the use of Best Available Control Technologies (BACTs).

Considering the intermittent nature of construction equipment operating within an influential distance to the nearest sensitive receptors, the duration of construction activities in comparison to the operational lifetime of the project, the typical long-term exposure periods associated with conducting health risk assessments, and compliance with regulations, the likelihood that any one nearby sensitive receptor

would be exposed to high concentrations of DPM for any extended period of time would be low.

Furthermore, as discussed above, the proposed project's construction-related emissions would be below the applicable mass emissions thresholds of significance for PM_{10}. According to CARB, more than 90 percent of DPM is less than one micrometer in diameter,[45] and, thus, DPM is a subset of $PM_{2.5}$, which comprises a portion of PM_{10}. As a California statewide average, DPM comprises about eight percent of $PM_{2.5}$ in outdoor air,[46] and would represent an even smaller percentage of PM_{10} emissions. Considering that the proposed project's construction-related PM_{10} emissions, which include emissions of DPM, would be below the YSAQMD's thresholds of significance, construction of the proposed project would not be expected to generate substantial DPM emissions such that an increase in cancer risk levels of more than 10 in one million persons or a non-cancer hazard index greater than 1.0 would occur.

Based on the above, the proposed project would not expose sensitive receptors to substantial concentrations of DPM during construction.

Criteria Pollutants

As discussed in the Existing Environmental Setting section and summarized in Table 4.3-1, criteria pollutant emissions can cause negative health effects. With regard to the proposed project, the principal criteria pollutants of concern are localized CO, ozone, and PM. The proposed project is not anticipated to result in impacts related to localized exposure of sensitive receptors to substantial concentrations of CO. Unlike CO and many TACs, due to atmospheric chemistry and dynamics, ozone and atmospheric PM typically act to impact public health on a cumulative and regional level, rather than a localized level. Due to the cumulative and regional nature of effects from criteria pollutants, the analysis of potential health effects of criteria pollutants is further discussed in Impact 4.3-6.

Conclusion

Based on the above, the proposed project would not result in the exposure of sensitive receptors to substantial levels of pollutant concentrations, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)

None required.

[45] California Air Resources Board. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10}).* Available at: https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health. Accessed June 2025.

[46] California Air Resources Board. *Overview: Diesel Exhaust & Health.* Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed June 2025.

4.3-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Based on the analysis below, the impact is *less than significant*.

Pollutants of principal concern include emissions leading to odors, emissions that have the potential to cause dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in Impacts 4.3-1 through 4.3-3 above. Therefore, the following discussion focuses on emissions of odors and dust.

Odors

As discussed above, due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. According to the YSAQMD, common types of facilities that are known to produce odors include, but are not limited to, wastewater treatment facilities, chemical or fiberglass manufacturing, landfills, composting facilities, food processing facilities, refineries, dairies, and asphalt or rending plants.[47] The proposed project would not introduce any such land uses and is not located in the vicinity of any such existing or planned land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and operation of construction equipment would be regulated in accordance with the In-Use Off-Road Diesel Vehicle Regulation, as discussed above. In addition, as required by Mitigation Measure 4.10-1 of this EIR, construction activities would be limited to normal daytime working hours (i.e., 7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 8:00 PM Saturday and Sunday). The proposed project would also be required to comply with all applicable YSAQMD rules and regulations, including, but not limited to, Rule 2.1, Rule 2.28, and Rule 2.5, which would help to control construction-related odorous emissions. Considering the large development area and buildout over two phases, construction equipment would operate at various locations throughout the project site intermittently, and the distances from the nearest sensitive receptors would allow for dispersal of diesel odors. Accordingly, substantial objectionable odors would not be expected to occur during construction activities.

The YSAQMD also regulates objectionable odors through Rule 2.5 (Nuisance), which prohibits any person or source from emitting air contaminants or other material that result in any of the following: cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or have a natural tendency to cause injury or damage to business or property. Rule 2.5 is enforced based on complaints. If complaints are received, the YSAQMD is required to investigate the complaint, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications. Thus, although not

[47] Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts [pg. 14].* July 11, 2007.

anticipated, if odor complaints are made after the proposed project is developed, the YSAQMD would ensure that such odors are satisfactorily addressed.

Dust

As noted previously, the proposed project is required to comply with all applicable YSAQMD rules and regulations for construction, including, but not limited to, Rule 2.1 (Control of Emissions), Rule 2.5 (Nuisance), and Rule 2.11 (Particulate Matter Concentration). Furthermore, according to YSAQMD Guidance, even projects not exceeding the YSAQMD construction-related PM thresholds should implement best management practices to reduce dust emissions and avoid localized health impacts, as described in Impact 4.3-1, above. Compliance with YSAQMD rules and regulations and best management practices would help to ensure that dust is minimized during project construction. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, which would not have the potential to create substantial dust emissions. Thus, proposed project operations would not include sources of dust that could adversely affect a substantial number of people.

Conclusion

For the aforementioned reasons, construction and operations associated with the proposed project would not result in substantial emissions, such as those leading to odors or dust, which could adversely affect a substantial number of people, and a ***less-than-significant*** impact would result.

Mitigation Measure(s)

None required.

4.3-5 Result in the inefficient or wasteful use of energy, or conflict with a State or local plan for renewable energy or energy efficiency. Based on the analysis below, the impact is *less than significant*.

Energy use associated with construction of the proposed project, as well as building energy use and transportation energy use associated with operations of the proposed project, are discussed below.

Construction Energy Use

Construction of the proposed project would involve increased energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met through a hookup to the existing electricity grid; however, grid power would be used as opposed to diesel generators, where feasible.

Typically, at construction sites, electricity from the existing grid is used to power portable and temporary lights or office trailers. Because grid electricity would be used

primarily for steady sources such as lighting, not sudden, intermittent sources such as welding or other hand-held tools, the increase in electricity usage at the site during construction would not be expected to cause any substantial peaks in demand. Construction of the proposed project, which would result in temporary increases in electricity demand, would not cause a permanent or substantial increase in demand that would exceed PG&E's demand projections or exceed the ability of PG&E's existing infrastructure to handle such an increase. Therefore, construction of the proposed project would not result in any significant impacts on local or regional electricity supplies, the need for additional capacity, or on peak or base period electricity demands. In addition, standards or regulations specific to construction-related electricity usage do not currently exist.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated pursuant to the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing a five-minute limit on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. Furthermore, as a means of reducing emissions, construction vehicles are required to become cleaner through the use of renewable energy resources. Engine tiers are used to describe the emissions intensity and efficiency of an engine. Construction equipment with Tier 0 or Tier 1 engines are the least efficient, and Tier 4 is the most efficient. In November 2021, the CARB began developing standards for Tier 5 engines. All fleets are currently prohibited from adding Tier 0, Tier 1, or Tier 2 vehicles to the fleet. In addition, starting January 1, 2024, fleets with a total horsepower over 2,501, excluding non-profit training centers, may not add any Tier 3 or Tier 4 Interim vehicles.[48] The In-Use Off-Road Diesel Vehicle Regulation would, therefore, help to improve fuel efficiency for equipment used in construction of the proposed project.

The CARB enforces off-road equipment regulations through their reporting system, Diesel Off-road Online Reporting System (DOORS). Each construction fleet is required to update their DOORS account within 30 days of buying or selling a vehicle, and DOORS automatically calculates the fleet average index for each fleet. The fleet average index is an indicator of a fleet's overall emission rate, and is based on each vehicle's engine horsepower and model year, and whether it is equipped with a Verified Diesel Emission Control Strategy (VDECS). If a fleet cannot, or does not want to, meet the fleet average target in a given year, the fleet may instead choose to comply with the BACT requirements. A fleet may meet the BACT requirements each year by turning over or installing VDECS on a certain percentage of its total fleet horsepower. 'Turnover' means retiring a vehicle, designating a vehicle as permanent low-use (a vehicle used less than 200 hours per year), repowering a vehicle with a higher tier engine, or rebuilding the engine to a more stringent emission standard. By

[48] California Air Resources Board. *Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation*. August 29, 2023.

each compliance date (annually on January 1st), the fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the BACT requirements.[49] The project would be required to comply with such regulations, which would ensure that construction equipment meets all State efficiency requirements.

Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to further reduce demand on oil and limit emissions associated with construction. Over time, as technology progresses and more stringent emissions standards are put in place, construction equipment engines become increasingly efficient. Proposed project construction would also be required to comply with all applicable YSAQMD rules and regulations, which are indirectly related to energy efficiency, which would help to further reduce energy use associated with the proposed project.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Building Energy Demand

The proposed project would include development of residential, neighborhood retail, and public/recreational uses. Energy use associated with operation of the proposed project would be typical of such uses, requiring electricity for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC) systems, electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment.

The proposed project is required to comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, including the CBSC and CARB standards, which would ensure that the future uses would be designed to be energy efficient to the maximum extent practicable. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed development on-site would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. As required by Section 8.01.090 of the Municipal Code, the proposed project would comply with Tier 1 standards of the CALGreen Code, which would otherwise be voluntary under the CBSC. The proposed project would also both be subject to the requirements included in Sections 8.01.060, 8.01.100, and 8.01.110 of the Municipal Code, and all applicable CAAP measures related to energy demand, as discussed in the Regulatory Context section, above. In addition, the 2022 CBSC and the 2022 Building Energy Efficiency Standards also require that newly constructed residential and non-residential buildings, including

[49] California Air Resources Board. *Frequently Asked Questions, Regulation for In-Use Off-Road Diesel-Fueled Fleets (Off-Road Regulation)*. August 2014.

grocery stores, offices, financial institutions, unleased tenant space, retail space, schools, warehouses, auditoriums, convention centers, hotel/motels, libraries, medical office building/clinics, and theaters, be developed to include a solar PV system. As discussed in the Draft Sustainability Plan for the proposed project (see Appendix D), all residential units would include a solar photovoltaic system. Specifically, low density units would include a minimum 3.0 kW solar system, medium density units would include a minimum 2.3 kW solar system, and high density units would include a minimum 1.6 kW solar system. For each type of residential unit, the estimated roof capacity would be determined and an expanded solar photovoltaic system would be offered as a purchase option for the homeowner. Educational materials would be provided explaining the increased production and anticipated savings in electricity costs with expanded solar. In addition, the proposed community gym would include rooftop solar. As discussed previously, the applicant has committed to generating a minimum of approximately 4,250,000 kWh per year of renewable energy by the proposed residential uses. Therefore, a portion of the electricity demand associated with the proposed project would be met by on-site renewable energy.

State regulations promote the generation of renewable energy and encourage energy efficiency through requirements placed on utility providers and strict development standards. For instance, the RPS require utilities, including the PG&E and VCE, to procure an increasing proportion of electricity from renewable sources. Ultimately the RPS requirements mandate that all electricity produced within the State be renewably sourced by the year 2045.

Based on the air quality modeling prepared for the proposed project, the proposed project is anticipated to result in increased electricity consumption of approximately 4.55 GWh annually during operations. Compared to the electricity consumption for all of Yolo County, the proposed project's contribution would represent a 0.25 percent increase in annual electricity demand as compared to current conditions.

Although the proposed project would increase electricity demand in the project area, the increased demand is not anticipated to conflict with the PG&E's or VCE's ability to meet the RPS requirements, or exceed PG&E's or VCE's capacity such that the energy demands associated with the proposed project would not be met.

Increased energy does not necessarily mean that a project would have an impact related to energy resources. Based on Appendix F of the CEQA Guidelines, a proposed project would result in an impact related to energy resources if a project would result in the inefficient use or waste of energy. As stated above, the proposed project would be required to comply with the efficiency standards set forth in the CBSC, CALGreen Code, Building Energy Efficiency Standards, CARB, the City's Municipal Code, and the City's CAAP, and the proposed project would not conflict with or obstruct any State or local plans related to renewable energy.

With regard to landscaping and maintenance equipment, AB 1346 requires all new small off-road engines sold after January 1, 2024, to be all-electric. By the time the proposed project is operational, a reasonable assumption can be made that at least a portion of the landscaping and maintenance equipment that would be used on-site would be electric. Given that electricity from PG&E and VCE is partially generated from

renewable sources, the use of electric landscaping and maintenance equipment would be considered more energy efficient than diesel- or gas-powered landscaping and maintenance equipment.

Transportation Energy Demand

In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by residents, visitors, and employees travelling to and from the project site.

The average fuel economy for the U.S. passenger vehicle fleet was 24.7 miles per gallon (mpg) in 2023, the most recent year such data is available.[50] In addition, petroleum refineries in the U.S. typically produce approximately 20 gallons of gasoline from one 42-gallon barrel of crude oil.

Using an average of 24.7 mpg and an annual VMT of approximately 28,141,866,[51] the proposed project is estimated to result in the consumption of approximately 56,967 barrels of crude oil per year.

California is estimated to consume approximately 605 million barrels of petroleum per year.[52] Based on the annual consumption within the State, vehicle trips generated by the proposed project could result in an approximately 0.01 percent increase in the State's current consumption of gasoline.

The calculation above is likely an overestimate, as the estimate does not account for the increasing ownership of electric vehicles. California leads the nation in registered alternatively-fueled and hybrid vehicles. In fact, under SB 500, the State has required that, to the extent allowed by federal law, all cars sold shall be zero-emission/electric vehicles starting in the year 2030. In addition, State-specific regulations encourage fuel efficiency and reduction of dependence on oil. Improvements in vehicle efficiency and fuel economy standards help to reduce consumption of gasoline and reduce the State's dependence on petroleum products. The 2022 CBSC also requires new developments to include the necessary electrical infrastructure for EV charging stations. As discussed in the Draft Sustainability Plan for the proposed project (see Appendix D), the proposed garages for each residential unit would pre-install eight-gauge wiring plus reserve room in electrical panels necessary to support Level 2 EV charging. The multifamily residential units without garages would provide Level 1 charging at five percent of all required parking spaces with a minimum of two parking spaces served; Level 2 charging at one percent of all required parking spaces where more than 20 parking spaces are required, with a minimum of one parking space served; conduit adequate for Level 2 charging to serve or reasonably be extended in the future to 25 percent of all parking spaces; and room in panel(s) and capacity to

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50 U.S. Energy Information Administration. *Total Energy, Table 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy*. Available at: https://www.eia.gov/totalenergy/data/browser/?tbl=T01.08#/?f=A&start=200001. Accessed June 2025.

51 The annual VMT estimate presented herein is based on the Transportation Impact Study prepared for the proposed project by Fehr & Peers.

52 U.S. Energy Information Administration. *California: State Profile and Energy Estimates*. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA. Accessed June 2025.

serve 20 percent of all parking spaces with Level 1 charging and five percent of all parking spaces with Level 2 charging. The community park would include at least 11 EV charging stations, which exceeds Davis Municipal Code requirements. An additional 32 stalls would be EV capable. Based on the above, the actual consumption of gasoline associated with the proposed project is anticipated to be even lower than the 0.01 percent statewide contribution noted above.

The proposed project would be required to comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, buildout of the proposed project would involve the provision of sidewalks throughout the project site, as well as several bicycle and pedestrian infrastructure improvements, as described in Impact 4.13-2 included in the Transportation chapter of this EIR and required by Mitigation Measure 4.13-2. Such improvements would provide pedestrian and bicycle connectivity within the project site, thereby helping to discourage driving and reduce vehicle trips and associated transportation energy demand.

Conclusion

Based on the above, the proposed project would not be considered to result in a wasteful, inefficient, or unnecessary use of energy, and therefore is not anticipated to conflict with a State or local plan for renewable energy or energy efficiency. Thus, impacts would be considered ***less than significant***.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

A project’s emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The geographic context for the cumulative air quality analysis includes Yolo County and surrounding areas within the portion of the SVAB that is designated nonattainment for ozone and PM.

Climate change occurs on a global scale, and emissions of GHGs, even from a single project, contribute to the global impact. However, due to the existing regulations within the State, for the purposes of this analysis, the geographic context for the analysis of GHG emissions presented in this EIR is the State of California.

Finally, a project’s impacts related to energy use may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The following discussion of energy impacts is based on the implementation of the proposed project in combination with buildout of the adopted City’s General Plan, as well as a list of approved or planned local projects within the project area. Additional details regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

4.3-6 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Based on the analysis below, even with implementation of mitigation, the project's incremental contribution to this significant cumulative impact is *cumulatively considerable* and *significant and unavoidable.*

Buildout of the proposed project would lead to the release of emissions that would contribute to the cumulative regional air quality setting. The following section includes a discussion of both the proposed project's contribution to the cumulative operational emissions, and the cumulative health effects of exposure to criteria pollutants. Because construction would occur over a relatively short time period as compared to the operational lifetime of the proposed project, construction emissions are not considered to be cumulative in nature.

Cumulative Emissions

The proposed project is within an area currently designated as nonattainment for ozone and PM AAQS. By nature, air pollution is largely a cumulative impact. Thus, the proposed project, in combination with other proposed and pending projects in the region, would significantly contribute to air quality effects within the SVAB, resulting in an overall significant cumulative impact. However, any single project is not sufficient enough in size to, alone, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's incremental impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, YSAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the significance thresholds, as identified by the YSAQMD and shown in Table 4.3-8 above, that project's emissions would be cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions.[53]

Accordingly, if the proposed project would result in an increase of ROG, NO_X, or PM_{10} in excess of the YSAQMD's operational phase cumulative-level emissions thresholds, which are equivalent to the YSAQMD's project-level operational emissions thresholds, the project could potentially result in a significant incremental contribution towards cumulative air quality impacts. The proposed project's unmitigated cumulative contribution to regional emissions are equivalent to the proposed project's unmitigated operational emissions, as presented in Table 4.3-11.

As shown in Table 4.3-11, unmitigated operational emissions of NO_X and PM_{10} associated with the proposed project would be below the YSAQMD's applicable

[53] Yolo-Solano Air Quality Management District. *Handbook for Assessing and Mitigating Air Quality Impacts* [pg. 7]. July 11, 2007.

thresholds of significance. However, the proposed project would result in operational emissions of ROG that would exceed the applicable YSAQMD threshold of significance. Therefore, the proposed project could result in a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment.

Cumulative Health Effects of Criteria Pollutants

The AAQS presented in Table 4.3-2 are health-based standards designed to ensure safe levels of criteria pollutants that avoid specific adverse health effects. Because the YSAQMD is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$, the YSAQMD, along with other air districts in the SVAB region, has adopted federal and State attainment plans to demonstrate progress towards attainment of the AAQS. Full implementation of the attainment plans would ensure that the AAQS are attained and sensitive receptors within the SVAB are not exposed to excess concentrations of criteria pollutants. The YSAQMD's thresholds of significance were established with consideration given to the health-based air quality standards established by the AAQS and are designed to aid the district in implementing the applicable attainment plans to achieve attainment of the AAQS. Thus, if a project's criteria pollutant emissions exceed the YSAQMD's mass emission thresholds of significance, a project would be considered to conflict with or obstruct implementation of the YSAQMD's air quality planning efforts, thereby delaying attainment of the AAQS. Because the AAQSs are representative of safe levels that avoid specific adverse health effects, a project's hinderance of attainment of the AAQS could be considered to contribute towards regional health effects associated with the existing nonattainment status of ozone and PM standards. However, as noted above, ascertaining cancer risk, or similar measurements of health effects from air pollutants, is very difficult for regional pollutants such as the ozone precursors ROG and NO_X, as 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. For example, ozone concentrations 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 possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

Nonetheless, as discussed in Impact 4.3-2, operation of the proposed project would result in emissions that exceed the YSAQMD's thresholds of significance. Consequently, implementation of the proposed project could conflict with the YSAQMD's adopted attainment plans or inhibit attainment of regional AAQS. Therefore, implementation of the proposed project could contribute towards regional health effects associated with the existing nonattainment status of ozone and PM standards.

Conclusion

Based on the above analysis, the proposed project's incremental contribution to the significant cumulative effect could be considered ***cumulatively considerable*** and, as a result, a ***significant*** impact could occur.

Mitigation Measure(s)

The following mitigation measure would reduce operational area-source ROG emissions. However, as discussed under Impact 4.3-2 above, with implementation of Mitigation Measure 4.3-2, operational area-source ROG emissions associated with the proposed project would still not be reduced to below the applicable threshold of significance. In addition, possible additional mitigation measures for further reducing ROG emissions cannot be feasibly enforced or verified.

With regard to mobile source emissions, the implementation of Mitigation Measure 4.13-4 as set forth in the Transportation chapter of this EIR, which requires implementation of TDM strategies to reduce the number of vehicle trips that would be generated by the residential component of the proposed project, would further reduce the proposed project's operational mobile source ROG emissions. However, as detailed above, the effectiveness of the TDM strategies set forth within Mitigation Measure 4.13-4 cannot be quantified at this time and subsequent vehicle trip reduction effects cannot be guaranteed. Furthermore, additional measures for the reduction of mobile source emissions (beyond the proposed project's inherent site and/or design features and the measures included in Mitigation Measure 4.13-4), sufficient to reduce emissions of ROG to below the applicable threshold of significance, are not available, nor feasible for the proposed project at this time.

Based on the above, even with implementation of the following mitigation measure, the proposed project's incremental contribution to the significant cumulative effect would remain *cumulatively considerable* and *significant and unavoidable*.

4.3-6 Implement Mitigation Measure 4.3-2.

4.3-7 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction. Based on the analysis below and with implementation of mitigation, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

Global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. Therefore, operational GHG emissions are generally of greater concern as compared to construction-related GHG emissions, as construction-related GHG emissions are a one-time release that would occur over a relatively shorter time period and are not typically expected to generate a significant contribution to global climate change. Nonetheless, construction GHG emissions can marginally contribute to global climate change, and, thus, are discussed in further detail below.

As discussed above, the City has not specifically adopted goals or thresholds to analyze GHG emissions from construction of proposed projects. As such, the YSAQMD is currently recommending GHG analysis consistent with the SMAQMD's

adopted thresholds of significance. For construction-related GHG emissions, the SMAQMD has adopted a threshold of significance of 1,100 $MTCO_2e$/yr.

Unmitigated construction-related GHG emissions have been estimated for development of the proposed project, as presented in Table 4.3-13, below.

Table 4.3-13
Maximum Unmitigated Construction GHG Emissions ($MTCO_2e$/yr)

Project GHG Emissions	Threshold of Significance	Exceeds Threshold?
1,594	1,100	**YES**

Source: CalEEMod, October 2025 (see Appendix G).

As shown in Table 4.3-13, the total unmitigated construction emissions associated with the proposed project would exceed the SMAQMD 1,100 $MTCO_2e$/yr threshold of significance.

Conclusion

Based on the applicable SMAQMD threshold of significance being applied for this analysis, as recommended by YSAQMD, implementation of the proposed project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG during construction. Thus, construction of the proposed project could result in a ***cumulatively considerable*** incremental contribution to this significant cumulative impact.

Mitigation Measure(s)

Implementation of Mitigation Measure 4.3-7(a), which requires the use of renewable diesel fuel in all off-road equipment greater than 25 horsepower, would reduce the project's construction-related GHG emissions. However, as shown in Table 4.3-14, construction-related GHG emissions associated with the proposed project would not be reduced to below the applicable SMAQMD threshold of significance. As a result, implementation of Mitigation Measure 4.3-7(b) would be required to further reduce construction-related GHG emissions. Overall, implementation of the following mitigation measures would reduce the proposed project's incremental contribution to the above significant cumulative impact to *less than cumulatively considerable.*

Table 4.3-14
Maximum Mitigated Construction GHG Emissions ($MTCO_2e$/yr)

Project GHG Emissions	Threshold of Significance	Exceeds Threshold?
1,406.93	1,100.00	**YES**

Source: CalEEMod, October 2025 (see Appendix G).

4.3-7(a) *Prior to approval of any improvement plans and/or grading plans, the project applicant shall provide proof of compliance with the*

following to the satisfaction of the City of Davis Community Development Department:

The project applicant shall show on the plans via notation that the contractor shall ensure that all off-road vehicles 25 horsepower or more to be used in the construction of the proposed project, including owned, leased, and subcontractor vehicles, shall be fueled by renewable diesel.

In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site.

Portable equipment over 50 horsepower must have either a valid YSAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.

Proof of conformance with the foregoing requirements shall be submitted by the project contractor to the City of Davis Community Development and Public Works Departments for review and approval.

4.3-7(b) *Prior to the initiation of construction of the proposed project, the project applicant shall demonstrate that construction-related GHG emissions would be reduced to 1,100 $MTCO_2e/yr$ and shall submit proof to the City of Davis Community Development Department.*

Construction-related GHG emissions can be reduced through several options, including, but not limited to, the following:

- *Modify the construction schedule to reduce the intensity of construction to lower emissions;*
- *Ensure that phases of development do not overlap;*
- *Improve fuel efficiency from construction equipment by:*
    - *Minimizing idling time either by shutting equipment off when not in use or reducing the time of idling to no more than three minutes (five-minute limit is required by the state airborne toxics control measure [Title 13, Sections 2449(d)(3) and 2485 of the California Code of Regulations]). Provide clear signage that posts this requirement for workers at the entrances to the site; and*
    - *Using equipment with new technologies (repowered engines, electric drive trains).*
- *Perform on-site emission reductions such as implementing*

on-site material hauling with trucks equipped with on-road engines (if determined to be less emissive than the off-road engines) or real, quantifiable, permanent, verifiable, and enforceable on-site emission reductions;

- *Use alternative fuels for generators at construction sites such as propane or solar, or use electrical power;*
- *Use a CARB-approved low carbon fuel for construction equipment; (NO_X emissions from the use of low carbon fuel must be reviewed and increases mitigated.)*
- *Encourage and provide carpools, shuttle vans, transit passes and/or secure bicycle parking for construction worker commutes;*
- *Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones;*
- *Recycle or salvage non-hazardous construction and demolition debris (goal of at least 75 percent by weight);*
- *Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials, and based on volume for roadway, parking lot, sidewalk and curb materials). Wood products utilized should be certified through a sustainable forestry program;*
- *Minimize the amount of concrete for paved surfaces or utilize a low carbon concrete option;*
- *Produce concrete on-site if determined to be less emissive than transporting ready mix;*
- *Use SmartWay certified trucks for deliveries and equipment transport; and*
- *Develop a plan to efficiently use water for adequate dust control.*

The project applicant may elect to implement any combination of the foregoing measures to reduce construction-related GHG emissions. All GHG emissions reductions must be quantified using CalEEMod and provided to the City of Davis Community Development and Public Works Department. Compliance with the aforementioned measures shall be ensured by the City of Davis Community Development and Public Works Department.

If the quantified reduction measures do not reduce construction-related GHG emissions associated with the proposed project to below 1,100 $MTCO_2e/yr$, offsite carbon credits may be purchased to make up the difference. The purchase of off-site mitigation credits shall be negotiated with the City and YSAQMD at the time that credits are sought. Off-site mitigation credits shall be real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). The offsets shall be

retired, and emissions must be offset through the end of the proposed project's construction period. Such credits shall be based on CARB-approved protocols that are consistent with the criteria set forth in subdivision (a) of Section 95972 of Title 17 of the California Code of Regulations, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Davis and/or the YSAQMD. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) any registry established by YSAQMD.

4.3-8 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation. Based on the analysis below and with implementation of mitigation, the project's incremental contribution to this significant cumulative impact is *cumulatively considerable* and *significant and unavoidable*.

An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases in CO_2 and, to a lesser extent, other GHG pollutants, such as CH_4 and N_2O. Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste.

As discussed above, the City of Davis has adopted a CAAP, as well as emissions reductions targets and emissions allowances for projects within the City. In March of 2019, the City adopted a resolution declaring a climate change emergency and accelerating the City's previously identified emissions reductions goal to a new goal of carbon neutrality by the year 2040. In recognition of the City Council's actions and emissions reductions efforts and policies enacted by the City's CAAP, for the purposes of this EIR, the proposed project would be considered to have a significant impact if emissions from proposed project operations would result in net positive operational emissions in the year 2040. Shall the proposed project be shown to reach net neutrality by the year 2040 compared to existing emissions levels associated with the site, the

proposed project would be considered to provide a proportional share of emissions reductions and would not inhibit attainment of citywide net carbon neutrality by the year 2040, nor would the proposed project conflict with the City's CAAP.

The total unmitigated annual operational GHG emissions for the first full year of operation for full buildout of the proposed project (assumed to be 2035) were estimated as presented in Table 4.3-15, as emissions from the first full year of operation are the highest and therefore represent the most conservative assumptions.

Table 4.3-15
Unmitigated Operational GHG Emissions
($MTCO_2e$/yr)

Source	Annual GHG Emissions
Mobile	9,356
Area	15.7
Energy	472
Water	96.8
Waste	292
Refrigerants	3.59
Vegetation	-35.4
Total Annual Operational GHG Emissions	**10,201**

Note: Rounding may result in slight differences in summation.

Source: CalEEMod, October 2025 (see Appendix G).

As shown in the table, maximum annual emissions resulting from project operations would equal approximately 10,210.00 $MTCO_2e$/yr. Between 2035 and 2040, existing State regulations, such as EV requirements, would act to reduce emissions from the levels shown in Table 4.3-15.

In addition, while the proposed project cannot rely solely on compliance with the CAAP GHG emissions reduction and climate change adaptation actions, the project applicant has committed to several project design features that would ensure the proposed project is developed in accordance with the CAAP goals.

For example, pursuant to the Draft Sustainability Plan prepared for the proposed project (see Appendix D), the project applicant has committed to all electric residential units; a portion of on-site units would be affordable housing units; the proposed project would include several bicycle, pedestrian, and transit infrastructure improvements; and the proposed project would implement TDM strategies to reduce VMT, as required by Mitigation Measure 4.13-4 of this EIR. Additionally, as discussed previously, the project applicant has committed to the provision of roof-top solar which would generate a total of 4,250,000 kWh per year of renewable energy. Such project design features were accounted for in the proposed project modeling, as applicable.

Nonetheless, project-specific features sufficient to reduce the anticipated emissions of 10,201.00 $MTCO_2e$/yr in the year 2035 to net carbon neutrality by the year 2040 are not currently included in the proposed project. Because project emissions could

exceed net carbon neutrality in the year 2040, implementation of the proposed project would conflict with the City's adopted goal of carbon neutrality by the year 2040.

In addition, the proposed project would be required to implement all applicable GHG emissions reduction actions included in the City's CAAP. The proposed project's consistency with the reduction actions set forth in the CAAP is discussed in further detail below.

City of Davis Climate Action and Adaptation Plan

The primary goal of a CAAP is to provide a plan for reducing GHG emissions. The City of Davis CAAP identifies reduction actions intended to reduce future GHG emissions to 37 percent below 2016 levels by 2030 and set the community on a trajectory toward the 2040 carbon neutrality goal.

The following discussion includes an analysis of the proposed project's consistency with the City of Davis CAAP.

The majority of the reduction actions included within the City's CAAP are targeted for implementation at the City-level, and are, therefore, not applicable to the proposed project. For example, under CAAP Action BE.6, the City would establish a carbon mitigation fund to collect voluntary and/or mandatory payments to mitigate local emissions activities, with collected funds used to support a range of local, climate-change-related projects. The proposed project could be subject to the referenced program, should any such program be adopted by the City in the future. However, CAAP Action BE.6, and many of the other measures included in the CAAP, are not directly applicable to the proposed project.[54]

The proposed project would be generally consistent with the remaining CAAP actions that are applicable to the proposed project. Specifically, Action TR.11 aims to "develop sustainable housing", which is further expanded on as "Increase housing opportunities to support the jobs/housing balance and decrease vehicle miles traveled. Develop incentive options to increase housing construction in the City, including high-density, mixed-use (especially office space and food service), transit oriented, and affordable options." The proposed project would consist of a mixed-use development community, including a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences across various residential neighborhoods. In addition, the proposed project would include transit improvements; neighborhood retail uses; a daycare facility; associated on-site roadway improvements; utility improvements; and recreational uses, such as a community park, mini park, and a

[54] Additional CAAP actions not applicable to the proposed project include voluntary Actions BE.1 and BE.2 related to existing buildings; actions related to implementation of future policies and programs that have not yet been developed within the City, such as Action BE.3, BE.8, TR.3, TR.4, TR.6, TR.7, TR.9, TR.10. WW.1, AD.1, AD.3, AD.5, CR.1, and CR.2; actions related to implementation of existing City programs not applicable to the proposed project such as Action TR.1, which aims to implement specifically-located EV charging projects, as identified in the City's EV Charging Plan (none of which are located on or near the project site), and Action TR.8, which aims to implement parking improvements in the downtown area; and Actions, such as BE.7, TR.2, AD.4, and AD.6 related to requirements associated with City-owned facilities and transportation fleets or critical public infrastructure such as hospitals. Similar to the future program proposed by Action BE.6, should any program or policy be adopted by the City in the future related to the aforementioned actions, the proposed project could be subject to such requirements, as applicable.

gym, open space, and greenbelts. Therefore, the proposed project is generally consistent with Action TR.11, as the proposed project would increase housing opportunities, including high-density, mixed-use, transit oriented, and affordable options. While the proposed project would have a significant VMT impact with respect to the VMT per capita standards used for the transportation analysis, Action TR.11 includes no explicit reference to new housing having to be at or below the City's VMT per capita thresholds. Instead, it correctly states that providing more local housing development will improve the City's jobs/housing balance, thereby resulting in fewer long-distance trips into the City from adjacent communities. Additionally, as discussed under Impact 4.13-4 in Chapter 4.13, Transportation, of this EIR, the proposed project would result in a 104,300-mile decrease region-wide from the baseline VMT, as calculated in the SACSIM travel demand model. The Action does reference the additive benefits of that housing having density, being situated in infill sites, and/or being a transit-oriented development. However, the policy does not conclude that this is the only type of housing that should be considered to achieve the Action. Therefore, the fact that the proposed project would result in increased per capita VMT does not in itself render the project inconsistent with Action TR.11.

As discussed above, all residential development within the proposed project would be consistent with Action BE.4 related to all-electric new construction. All on-site residents would also have the opportunity to opt into receiving energy from VCE, ensuring that the proposed project would be consistent with Action BE.5, which is intended for the City to provide increased community solar energy by partnering with VCE to increase capacity in support of citywide building and transportation electrification, invest in community solar energy, and provide solar battery storage, as well as develop financing/incentive options to support building and transportation energy electrification and energy efficiency improvements. Action BE.5 also encourages all subscribers to enroll in the VCE UltraGreen option.

Several CAAP actions, such as Action TR.5, which is directly applicable to the proposed project, and Citywide actions such as Actions TR.3, TR.4, TR.6, and TR.7, are related to increasing the use of alternative transportation modes within the City. The proposed project would include several improvements to the bicycle and pedestrian network within the City, such as construction of new bicycle lanes, bicycle and pedestrian crossings, and incorporation of signage and traffic-calming measures to improve mode-share safety on internal roadways used by bicyclists. The aforementioned improvements would facilitate the use of alternative transportation modes within the City. Furthermore, several existing bus stops are located less than 0.25-mile from the project site along roadways in the project vicinity such as Alhambra Drive, Monarch Lane, and East Covell Boulevard. The proposed project also includes the construction of a new bus stop at the southwest corner of the site and a transit station within the Community Park north of East Covell Boulevard. The project vicinity is served by Unitrans Routes E, F, L, P, Q, and T, which serve a variety of retail, employment, medical, institutional, and recreational destinations throughout the City and on the UC Davis campus, as well as Yolobus Route 43, which provides commute bus service for Davis residents who work in Downtown Sacramento. Therefore, the proposed project would be generally consistent with Action TR.5, and, while not directly applicable to the proposed project, would generally be consistent with the goals of Citywide Actions TR.3, TR.4, TR.6, and TR.7.

Finally, with regard to Action AD.2, which aims to expand urban forest in parks, greenbelts, and open space with climate-ready species that provide shade, the proposed project would include a total of approximately 72.2 acres of parks, open space, greenbelts, and natural vegetation areas (including the agricultural buffer). In addition, the proposed project would plant 2,500 new trees throughout the site to create an urban forest and enhance landscaping. Of the 2,500 trees on-site, a total of 552 new trees would be located within the UATA, with 267 trees in the northern portion of the UATA and 285 trees in the eastern portion of the UATA. Thus, trees would be planted throughout such areas, in accordance with City requirements. Therefore, the proposed project would generally be consistent with Action AD.2.

It shall also be noted that while, as discussed above, several actions included in the CAAP are related to implementation of future citywide policies and programs that have not yet been developed within the City, the proposed project would include several design features that would generally be consistent with the goals of such actions. For example, the proposed project would be built in compliance with the requirements of the CalGreen Tier 1 standards, as required by Section 8.01.090 of the Municipal Code, and would include the provision of on-site renewable energy, as well as EV charging infrastructure, generally consistent with the goals of Citywide Actions BE.3, TR.10, and AD.1. In addition, the proposed project would integrate Low Impact Development (LID) measures and volume-based best management practices such as bioretention, infiltration features, and pervious pavement, as well as flow-based best management practices, such as vegetated swales and stormwater planters throughout the site to provide stormwater quality treatment, consistent with the City of Davis Storm Water Quality Control Standards, generally consistent with the goals of Action AD.3. With regard to on-site landscaping improvements, the proposed project would be required to select a plant palette that includes a mix of native, drought-tolerant, climate-ready, and carbon-capturing qualities associated with the new trees, shrubs, and seasonal grasses, generally consistent with the goals of Action WW.1. Finally, as discussed in Chapter 4.13, Transportation, of this EIR, the proposed project would implement a series of TDM strategies, as recommended by the California Air Pollution Control Officers Association (CAPCOA) Handbook for Assessing GHG Emission Reductions, Climate Vulnerabilities, and Health and Equity (December 2021), to reduce project-generated VMT to the maximum extent feasible, generally consistent with the goals of Action TR.11.

Therefore, implementation of the proposed project would be consistent with the overarching goal of the CAAP, which is to reduce GHG emissions.

Conclusion

Based on the above, implementation of the proposed project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG, and the proposed project's incremental contribution to this significant cumulative impact would be ***cumulatively considerable***.

Mitigation Measure(s)

Implementation of Mitigation Measure 4.3-8 would achieve a downward trajectory of operational GHG emissions, assuming an equal-level reduction per year sufficient to reach zero $MTCO_2e$/yr by 2040. Mitigation Measure 4.3-8 would ensure that implementation of the proposed project would not result in long-term operational impacts related to GHG emissions or the creation of conflicts with an applicable regulation. However, due to uncertainties related to the potential efficacy and feasibility of the GHG reductions measures, as well as the availability of off-site carbon credit programs, the full GHG reductions associated with the proposed project cannot be guaranteed at this time. Therefore, the impact would remain *cumulatively considerable* and *significant and unavoidable*.

4.3-8 *The project proponent shall prepare and implement a GHG Reduction Plan, to the satisfaction of the City, to demonstrate a downward trajectory in GHG emissions, towards the goal of zero net GHG emissions by the year 2040. Prior to building permit issuance for each phase of the proposed project, the project proponent shall indicate how to complete and implement the following steps:*

1. *Model operational GHG emissions using CalEEMod, or another method accepted for the purpose of modeling GHG emissions for the proposed project, taking into account applicable building standards and other regulatory requirements, as well as building design, use of renewable energy, etc. The updated modeling shall take into account any updated project design measures incorporated in compliance with this mitigation measure or as proposed in future project design details.*
2. *Based on the construction and operational schedules proposed at the time of building permitting, the modeled emissions shall be compared to the maximum permitted emissions for the first year of occupancy, based on the applicable Table below:*

Proposed Project		
Year	**Maximum Permitted Net Project Emissions ($MTCO_2e$)**	**Emissions Reductions Achieved ($MTCO_2e$)**
2035	10,201.00	0.00
2036	8,160.80	2,040.20
2037	6,120.60	4,080.40
2038	4,080.40	6,120.60
2039	2,040.20	8,160.80
2040	0.00	10,201.00
Total Emissions Reductions		*30,603.00*

3. *Should net operational emissions be shown to exceed the maximum emissions levels presented in the applicable table above, the project applicant shall identify feasible actions to achieve sufficient emissions reductions for the year or years being modeled. Reduction measures may include, but are not limited to:*
    - *Use of energy-star appliances in all or part of the project;*
    - *Installation of on-site photovoltaic systems in excess of the City's or State standards in place at the time of this environmental analysis;*
    - *Construct on-site or fund off-site carbon sequestration projects (such as tree plantings or reforestation projects);*
    - *Implement Transportation Demand Management strategies, such as CAPCOA Handbook Strategy T-16 and T-20-A, in accordance with Mitigation Measure 4.13-4 of this EIR;*
    - *Provide electric vehicle charging infrastructure in excess of existing Tier 1 CBSC requirements; and/or*
    - *Purchase carbon credits to offset project annual emissions. Carbon offset credits shall be verified and registered with The Climate Registry, the Climate Action Reserve, or another source approved by CARB, YSAQMD, or the City of Davis. Off-site mitigation credits shall be real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code Section 38562, subdivisions (d)(1) and (d)(2). The offsets shall be retired, and emissions must be offset through the year 2040. Such credits shall be based on CARB-approved protocols that are consistent with the criteria set forth in subdivision (a) of Section 95972 of Title 17 of the CCR, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Davis and/or the YSAQMD. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) any registry established by YSAQMD.*

4. *The emissions reductions resulting from implementation of the above measures shall be calculated, using methods acceptable to the City.*
5. *Proof of compliance with the maximum annual net emissions targets and the steps above shall be verified through the submittal of a Technical Memorandum of Compliance (TMC) to the City of Davis Department of Community Development. The TMC shall document the following minimum items: modeling (step 1); comparison of modeled emissions to maximum emissions levels identified in Mitigation Measure 4.3-8 (step 2); chosen feasible actions to achieve required reductions (step 3); and measurable GHG reduction value of each action (step 4). TMCs prepared in compliance with the foregoing steps may cover individual operational years or multiple operational years. Should a TMC be prepared for multiple operational years, the TMC shall demonstrate compliance with the maximum emissions levels for each year included in the TMC.*
6. *Implement the authorized actions and provide evidence of this to the City of Davis Department of Community Development. The City upon review and acceptance of implementation, shall issue the certificate of occupancy.*

4.3-9 Result in a cumulatively considerable inefficient or wasteful consumption of energy or conflict with a State or local plan for renewable energy or energy efficiency. Based on the analysis below, the cumulative impact is *less than significant*.

Impact 4.3-5 discusses the energy demand on a project-level associated with the proposed project within the context of existing State plans and regulations, as well as local plans. As discussed previously, the proposed project would involve consumption of diesel, gasoline, and electricity throughout construction and operations. However, all proposed structures would be built in compliance with existing statewide mandatory energy efficiency standards, such as those contained in the California Building Energy Efficiency Standards and the CALGreen Code. In addition, similar to the proposed project, as required by Section 8.01.090 of the Municipal Code, all future development within the City of Davis would be required to comply with Tier 1 standards of the CALGreen Code, which would otherwise be voluntary under the CBSC. Future development would also be subject to the requirements included in Sections 8.01.060, 8.01.100, and 8.01.110 of the Municipal Code, and all applicable CAAP measures related to energy demand, as discussed in the Regulatory Context section, above. Compliance with the energy efficiency standards would reduce the amount of electricity consumed by the proposed development. State regulations would also help to reduce the amount of energy consumed by on-road vehicles over time. For instance, State and federal emissions standards and fuel economy standards result in increased fuel efficiency for on-road vehicles. Overall, as concluded above, the proposed project would result in a less-than-significant impact related to the inefficient or wasteful use of energy or conflicting with a State or local plan for renewable energy or energy efficiency.

Similar to the proposed project, all future development within the City of Davis would be required to comply with applicable State and local regulations related to energy efficiency. Increased efficiency would be ensured in the future as cumulative development occurs due to compliance with the State's robust energy efficiency requirements. For example, the 2022 CBSC and the 2022 Building Energy Efficiency Standards require that newly constructed residential and non-residential buildings, including grocery stores, offices, financial institutions, unleased tenant space, retail space, schools, warehouses, auditoriums, convention centers, hotel/motels, libraries, medical office building/clinics, and theaters install a solar PV system. Furthermore, energy efficiency regulations have been getting progressively more stringent over time. Thus, as cumulative development occurs under the increasingly stringent regulations, the energy use associated with such cumulative development is reasonably anticipated to be increasingly energy efficient over time as well.

Based on the above, implementation of the proposed project, in combination with other cumulative development, would not result in the wasteful or inefficient use of energy. Because the proposed project would not conflict with a local plan to increase energy efficiency and reduce energy consumption, a ***less-than-significant*** cumulative impact would occur.

Mitigation Measure(s)

None required.

4.4. Biological Resources

4.4 BIOLOGICAL RESOURCES

4.4.1 INTRODUCTION

The Biological Resources chapter of the EIR evaluates the biological resources known to occur or potentially occur within the project site and surrounding environment. The chapter describes the potential impacts associated with development of the proposed project to biological resources and identifies measures to eliminate or substantially reduce impacts to a less-than-significant level. Existing plant communities, wetlands, wildlife habitats, and potential for special-status species and communities are discussed for the project region. The information contained in the analysis is primarily based on a Biological Resources Assessment (BRA) (see Appendix H of this EIR), Aquatic Resources Delineation Report (ARD) (see Appendix I of this EIR), and an Arborist Survey (see Appendix J of this EIR) prepared by HELIX Environmental Planning (HELIX).[1,2,3] Further information was sourced from the City of Davis General Plan[4] and associated General Plan EIR,[5] and the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).[6]

4.4.2 EXISTING ENVIRONMENTAL SETTING

The following sections describe the regional biological setting in which the project site is located, the biological setting of the site, and the special-status species known to occur within the site and surrounding environments.

Regional Setting

The project site consists of approximately 232 acres located north of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis, California, in a currently unincorporated portion of Yolo County, California. The City of Davis experiences a Mediterranean-type climate with cool, wet winters, and hot, dry summers. Temperatures in the project region fluctuate from average highs in July of 93 degrees Fahrenheit, with average lows in December of 39 degrees Fahrenheit.[7] Nearly all precipitation occurs between October and April in the form of rainfall, with February typically the wettest month, averaging 4.1 inches.

The City of Davis is located within the Central Valley region of California, within southeastern Yolo County. The Central Valley is a north-south oriented valley that extends approximately 430 miles from southern Tehama County to south-central Kern County in southern California. Elevations in the Central Valley range from approximately zero to 400 feet above mean sea level (amsl). In

1 HELIX Environmental Planning. *Willowgrove Project Biological Resources Assessment*. May 2025.
2 HELIX Environmental Planning. *Willowgrove Project Aquatic Resources Delineation Report*. May 2025.
3 HELIX Environmental Planning. *Arborist Survey for the Willowgrove Project, City of Davis, Yolo County, California.* April 2025.
4 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
5 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.
6 Yolo Habitat Conservancy. *Yolo Habitat Conservation Plan/Natural Community Conservation Plan*. April 2018.
7 Weather Spark. *Climate and Average Weather Year Round in Davis*. Available at: https://weatherspark.com/y/1120/Average-Weather-in-Davis-California-United-States-Year-Round. Accessed June 2025.

general, the borders of the Central Valley are areas where alluvial soils grade into bedrock features. Biological communities in the Central Valley once supported vast areas of grassland, marshes, and riparian woodland. The landscape is currently dominated by woodland biological communities, typically referred to as the foothills, with land uses that are predominantly agricultural. It includes an existing culvert in Channel A and dirt road located in the northwestern portion of the project site which serves as the current crossing for the existing agricultural operations.

Project Setting

The approximately 237.56-acre Study Area evaluated in the BRA encompasses the entire 232-acre project site and the portion of East Covell Boulevard that fronts the project site. Six additional off-site areas, totaling approximately 4.23 acres, were also assessed. Off-site improvements include the widening of East Covell Boulevard, sanitary sewer connections, proposed paved trail landscaping along the existing paved trail within the Wildhorse Agricultural Buffer greenbelt, and a potential access road east of the project boundary. The Study Area is generally flat, almost entirely at an elevation of approximately 35 feet amsl, and largely comprised of active agricultural fields with interspersed dirt access roads and ditches. Aerial imagery indicates that hayfields have been cultivated on-site for at least the past 68 years. A drainage course, referred to as Channel A, along with its associated non-native riparian corridor, passes through the Study Area from the west to the northeast. It includes an existing culvert in Channel A and dirt road located in the northwestern portion of the project site, which serves as the current crossing for the existing agricultural operations.

Yolo HCP/NCCP Land Cover Types

HELIX identified three biological communities within the Study Area: Irrigated Hayfield, Riverine, and Urban, as shown in Figure 4.4-1 and summarized in Table 4.4-1. A total of seven biological communities occur in off-site areas, which include Annual Grassland, Perennial Grassland, Deciduous Orchard, Irrigated Hayfield, Ruderal, Valley Foothill Riparian, and Urban. All habitat types were reviewed by HELIX and compared to habitats mapped in the Yolo HCP/NCCP and updated per field conditions. The land cover types are discussed further below.

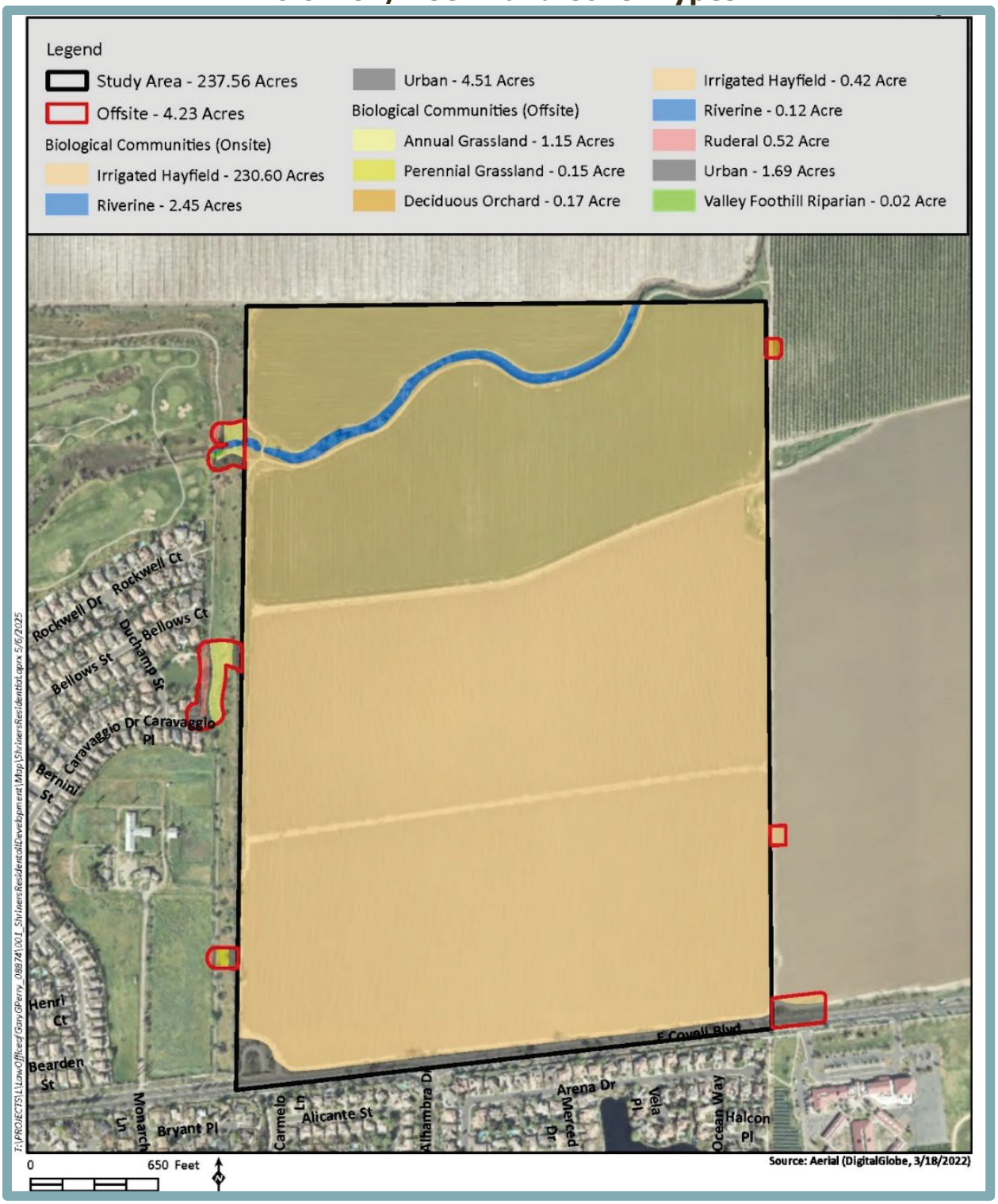
Table 4.4-1
Yolo HCP/NCCP Land Cover Types Within the Study Area and Off-Site Areas

Land Cover Type	Acres[1]	
	Project Site	Off-Site Areas
Irrigated Hayfield	230.6	0.42
Urban	4.51	1.69
Riverine	2.45	0.12
Annual Grassland	--	1.15
Perennial Grassland	--	0.15
Deciduous Orchard	--	0.17
Ruderal	--	0.52
Valley Foothill Riparian	--	0.02
Total	**237.56**	**4.23**

[1] Small summation errors may occur due to rounding.

Source: HELIX Environmental Planning, 2025.

Figure 4.4-1
Yolo HCP/NCCP Land Cover Types



Note: Off-site areas outlined in red pop-outs

Irrigated Hayfield

Irrigated Hayfield covers the majority of the Study Area and is common in the surrounding area. Vegetation in this community is varied and does not conform to normal habitat stages. Approximately 230.60 acres of irrigated hayfield occur in the Study Area and 0.42-acre occurs in the off-site areas.

Few plant species were observed in the Study Area and the majority of fields were bare. Plant species observed along the perimeters of the fields are ruderal and invasive, and include species such as black mustard (*Brassica nigra*) and slim oats (*Avena barbata*). The irrigated hayfield is also rotated with truck crops, which consist of tomatoes, sunflowers, and alfalfa.

Two earthen-lined agricultural ditches occur within the irrigated hayfield. The ditches are constructed features used to deliver water from a water delivery system. One ditch is located entirely within the hayfield, while the other drains the hayfield. Both features are transient and are observed in different locations depending on the agricultural needs of the crop. Aerial imagery indicates the ditches are managed, moved, and filled as crops are rotated and cultivated. The ditches are overgrown with dense, ruderal vegetation such as Johnsongrass (*Sorghum halepense*), broad-leaf pepperweed (*Lepidium latifolium*), wild carrot (*Daucus carota*), and black mustard. Several groundwater pumps were observed within portions of the ditches and hayfield that were tied into the ditches.

Urban

Urban habitat is often comprised of built structures, landscaped areas, and/or maintained surfaces, such as roads, bike paths, or parking lots. Vegetation that does occur within this habitat type is often ornamental rather than invasive or noxious weeds, such as in ruderal habitat types. Urban habitats typically retain a soil substrate, but the vegetation communities are either lacking or are comprised of mostly ruderal plant species if not landscaped. Approximately 4.51 acres of urban habitat occurs within the Study Area and 1.69 acres occur in the off-site area and is made up of paved roads, walking paths, and landscaped areas.

Valley Foothill Riparian

A total of 0.02-acre of valley foothill riparian habitat was mapped in an off-site area, which is generally situated along the bank of an intermittent drainage. Vegetation in the valley foothill riparian habitat generally consisted of polished willow (Salix laevigata), without understory vegetation. Valley foothill riparian is in a topographically low area and is situated between ruderal areas and the intermittent drainage, which supports seasonal marsh vegetation.

Annual Grassland

A total of 1.15 acres of annual grassland was mapped in off-site areas. The annual grassland community occurs in an area associated with walking path and revegetation areas in the Wildhorse Agricultural Buffer. Annual grassland is dominated by invasive species, which include foxtail barley (*Hordeum murinum*), yellow star-thistle (*Centaurea solstitialis*), ripgut brome (*Bromus diandrus*), and rattail sixweeks grass (*Festuca myuros*). The annual grassland supports a population of fossorial mammal species as evidenced by California ground squirrel (*Otospermophilus beecheyi*) observed during the survey. Burrowing mammals were detected in the annual grassland and adjacent perennial grassland areas and consisted of large burrow complexes.

Perennial Grassland

A total of 0.15-acre of perennial grassland was mapped in off-site areas. The perennial grassland community occurs in an area associated with walking path and revegetation areas in the Wildhorse Agricultural Buffer. Perennial grassland in the off-site area is dominated by a mix of invasive species consistent with annual grassland described above, but is dominated by perennial grass species that include California fescue (*Festuca californica*), deer grass (*Muhlenbergia rigens*), and beardless wild rye (*Elymus triticoides*). Perennial grassland appears to be part of a restoration project along the walking path. The perennial grassland supports a population of fossorial mammal species which consisted of large burrow complexes from California ground squirrels.

Deciduous Orchard

A total of 0.17-acre of deciduous orchard is present in an off-site area on the northeastern portion of the Study Area. The acreage comprises a small area that produces a nut crop. Deciduous orchards are a single-species tree dominated habitat. Depending on the tree type and pruning methods, trees are usually low and bushy with an open understory to facilitate harvest. Crowns usually touch and are usually in a linear pattern. Spacing between trees is uniform depending on the desired spread of mature trees. Characteristic species include walnuts (*Juglans regia*).

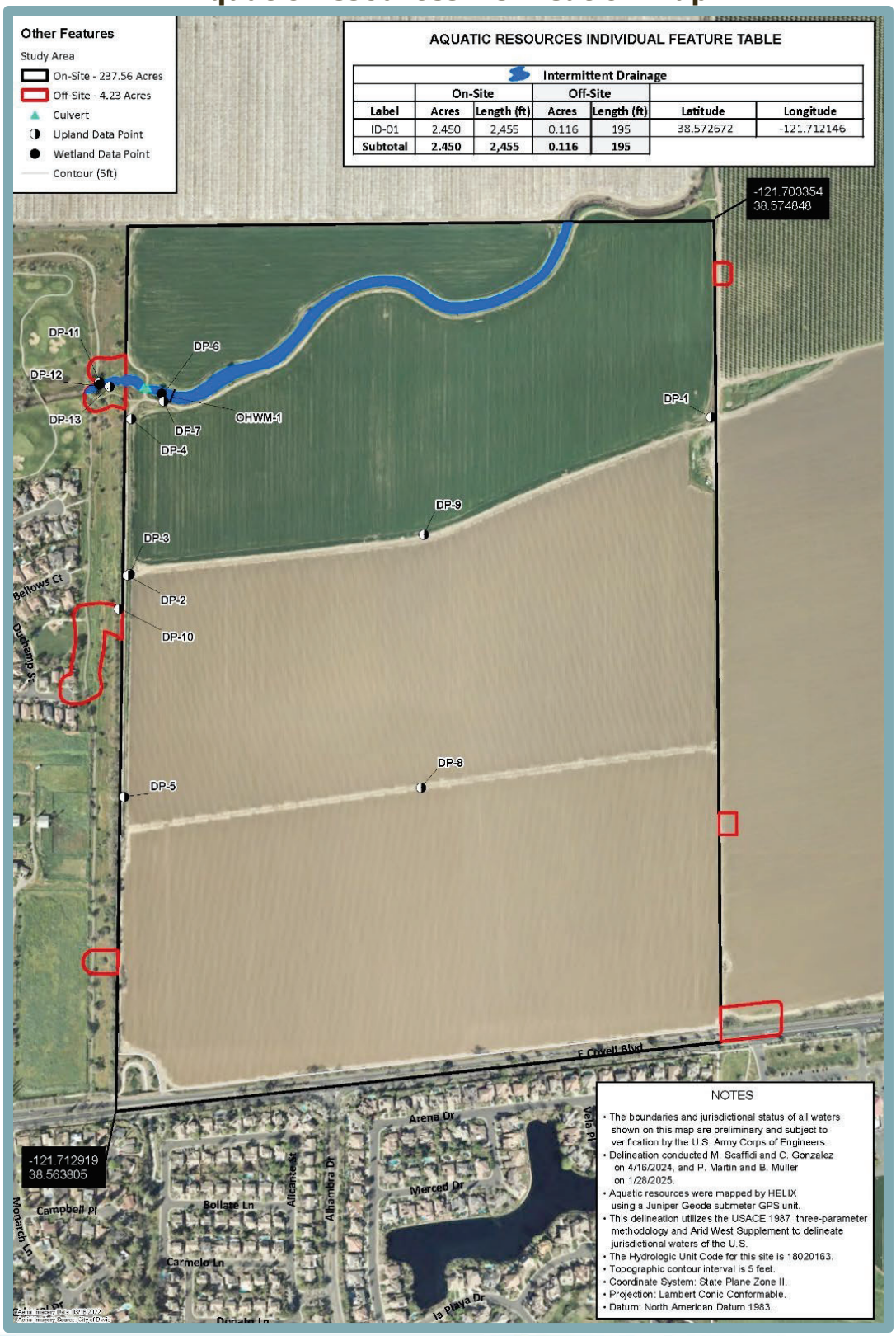
Riverine

A total of approximately 2.450 acres and 2,455 linear feet of intermittent drainage (riverine) was mapped within the Study Area and is known as Channel A. A total of approximately 0.116-acre and 195 linear feet of intermittent drainage occurs in an off-site area west of the Study Area, but represents the same intermittent drainage. The intermittent drainage passes through the Study Area from the west to the northeast and drains to Willow Pass Slough. The riverine habitat is seasonally inundated based on aerial imagery and was dry on October 5, 2023, and January 28, 2025. The intermittent drainage was partially inundated during the site visit on April 16, 2024. The riverine habitat drains surrounding agricultural lands and remains inundated for long enough duration to support a dominance of hydrophytes (i.e., water-loving plants). Intermittent drainages are typically fed by waters from a seasonally perched groundwater table and are supplemented by precipitation and storm water runoff. The intermittent drainage system also receives hydrological inputs from surrounding land uses that include irrigation of adjacent orchards, row crops, and the Wildhorse Golf Course. After the initial onset of rains, the drainage features have persistent flows throughout and past the end of the rainy season. Typically, the drainage features exhibit a defined bed and bank and show signs of scouring because of rapid flow events. The bed of the intermittent drainage in the Study Area consists of clay and loam substrates with steeply incised banks and without a floodplain. Hydrophytic vegetation observed in this feature consisted of tall flatsedge (*Cyperus eragrostis*), Mexican rush (*Juncus mexicanus*), Fremont cottonwood (*Populus fremontii*), polished willow (*Salix laevigata*), boxelder (*Acer negundo*), and California bulrush (*Schoenoplectus californicus*). The riverine habitat is a tributary to Willow Pass Slough, which is ultimately a tributary to Prospect Slough and the Sacramento River.

Aquatic Resources

HELIX conducted an ARD for the Study Area, which as discussed above, identified approximately 2.450 acres and 2,455 linear feet of riverine habitat comprised of intermittent drainage within the Study Area, known as Channel A (see Figure 4.4-2). A total of approximately 0.116-acre and 195 linear feet of intermittent drainage occur in an off-site area west of the Study Area, but still part of Channel A.

Figure 4.4-2
Aquatic Resources Delineation Map



The ordinary high water mark (OHWM) of the intermittent drainage was placed below the bank break in the bank slope near the outer edge of the low flow channel. Evidence of shelving was present below the OHWM, which encloses the low flow channel.

Special-Status Species

Special-status species are species that have been listed as threatened or endangered under the federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or are of special concern to federal resource agencies, the State, or private conservation organizations. A species may be considered to have special status due to declining populations, vulnerability to habitat change, or restricted distributions. A general description of the criteria and laws pertaining to special-status classifications is described below. Special-status plant and wildlife species may meet one or more of the following criteria:

1. Listed as threatened or endangered, or proposed or candidates for listing by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS);
2. Listed as threatened or endangered and candidates for listing by the California Department of Fish and Wildlife (CDFW);
3. Identified as Fully Protected species or Species of Special Concern by CDFW;
4. Identified as Medium or High priority species by the Western Bat Working Group (WBWG); and
5. Plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS) and CDFW (CRPR 1, 2, and 3):
    a. CRPR 1A: Plants presumed extinct.
    b. CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
    c. CRPR 2A: Plants extirpated in California, but common elsewhere.
    d. CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
    e. CRPR 3: Plants about which the CNPS needs more information – a review list.
    f. Identified as a Covered Species in the Yolo HCP/NCCP.

Listed and Special-Status Plant Species

According to the BRA conducted by HELIX, 22 special-status plant species have the potential to occur on-site or in the vicinity of the Study Area. Based on field observations, published data, and literature review, special-status plant species do not have the potential to occur within the Study Area. As part of determining the potential for special-status plant and wildlife species to occur within the Study Area, the following set of criteria was used:

- **Will Not Occur:** Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the Study Area;
- **Not Expected:** Species move freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur in the Study Area, the potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100 percent certainty;
- **Presumed Absent:** Habitat suitable for residence and breeding occurs in the Study Area; however, species-specific surveys conducted for the current project and applicable species were negative;
- **May Occur:** Species was not observed on the site, and breeding habitat is not present, but the species has the potential to use the site for dispersal;

- **High:** Habitat suitable for residence and breeding occurs in the Study Area, and the species has been recorded recently in or near the Study Area but was not observed during surveys for the current project; and
- **Present:** The species was observed during biological surveys for the current project and is assumed to occupy the Study Area or use the Study Area during some portion of its life cycle.

According to the database query, 22 listed and/or special-status plants have the potential to occur on-site or in the vicinity of the Study Area. As shown below in Table 4.4-2, and discussed below in Impact 4.4-1, based on field observations, published data, and literature review, special-status plant species do not have the potential to occur within the Study Area.

Listed and Special-Status Wildlife Species

According to the BRA conducted by HELIX 45 special-status wildlife species have the potential to occur on-site or in the vicinity of the Study Area. Based on field observations, published information, and literature review nine of the 45 special-status wildlife species were determined to have potential to occur within the Study Area. Such species include Monarch butterfly (*Danaus plexippus* pop 1.), Crotch's bumble bee (*Bombus crotchii*), northwestern pond turtle (*Actinemys marmorata*), giant garter snake (*Thamnophis gigas*), tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), and Modesto song sparrow (*Melospiza melodia* pop. 1). In addition to the aforementioned special-status wildlife species, other birds and raptors protected under federal, State, and local laws/policies also have the potential to occur within the Study Area.

The following discussions provide further details of the special-status wildlife species with the potential to occur within the Study Area.

Crotch's Bumble Bee

Crotch's bumble bee is a CESA candidate species that occurs in grassland and scrub habitats. New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows. The species is a generalist forager and has been reported to visit a wide variety of flowering plants. Food plants include milkweed (*Asclepias* spp.), snapdragon (*Antirrhinum* spp.), godetia (*Clarkia* spp.), California poppy (*Eschscholzia* spp.), buckwheat (*Eriogonum* spp.), pincushion (*Chaenactis* spp.), lupine (*Lupinus* spp.), burclover (*Medicago* spp.), blue tansy (*Phacelia* spp.), and sage (*Salvia* spp). The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the following spring. The species is rare throughout its range and in decline in the Central Valley and Southern California. The current known range of the species follows a small strip from western Trinity County south to Tehama County and along the entire Central Valley and Coastal California south of Monterey to the southernmost portions of the State. The range is generally bound on the east by the high Sierra Nevada range and areas east of Bishop, Ridgecrest, and the Salton Sea.

The annual grassland, perennial grassland in off-site areas, and riverine habitats in on-site areas of the Study Area provide potential habitat for Crotch's bumble bee where small mammal burrows are present. The interior of the Study Area is agricultural land, and the western off-site Study Areas consist of urban and grassland areas that are subjected to routine management activities associated with landscape maintenance.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Plants					
Astragalus tener var. *ferrisiae* Ferris' milk-vetch	--	--	CRPR 1B.1	An annual herb that occurs in meadows, seeps, and grassland habitats. Ferris' milk-vetch is typically found on subalkaline flats on overflow land in the Central Valley; usually in dry, adobe soil. Occurs from four to 80 meters elevation. Blooms April to May.	**Will not occur.** Meadow, seep, and grassland habitats do not occur in the on-site or off-site Study Areas and suitable soil types are absent. In addition, subalkaline flats do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. The species does not occur in riverine habitats. Two documented occurrences of the species are located within five miles of the on-site and off-site Study Areas; however, the occurrences are from 1926 and 1954 and may no longer be extant.
Astragalus tener var. tener Alkali milk-vetch	--	--	CRPR 1B.2	An annual herb that occurs in alkaline soils within alkali flats, grasslands, playas, and vernal pools from zero to 170 meters elevation. Blooms March to June.	**Will not occur.** Grasslands, playas, vernal pools, and alkaline flats do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. The species does not occur in riverine habitats.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					Four documented occurrences of the species are located within five miles of the on-site and off-site Study Areas; three occurrences are presumed extirpated with the remaining record located 4.6 miles north of the Study Area. The aforementioned record documents an occurrence from 2010 in Woodland.
Atriplex cordulata var. cordulata Heartscale	--	--	CRPR 1B.2	An annual herb that occurs in sandy, saline or alkaline soils in chenopod scrub, valley and foothill grasslands, meadows, and seeps from three to 275 meters elevation. Blooms April to October.	**Will not occur.** While some soil types mapped within the on-site and off-site Study Areas range from neutral to alkaline, chenopod scrub, grasslands, meadows, or seeps do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Heartscale does not occur in riparian habitats. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas; however, the occurrence is considered extirpated.
Atriplex depressa Brittlescale	--	--	CRPR 1B.2	An annual herb found in alkaline and clay soils in playas, grasslands, vernal pools, chenopod scrub, meadows, and seeps from one to 320 meters	**Will not occur.** Playa, grassland, chenopod scrub, and suitable aquatic habitats do not occur in the on-site or off-site Study Areas and suitable soil types are absent. The on-site and off-site Study Areas are regularly disturbed in

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				elevation. Blooms April to October.	association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. The species does not occur in riverine habitats. Two documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Carex comosa Bristly sedge	--	--	CRPR 2B.1	A perennial rhizomatous herb found in marshes and swamps, coastal prairie, and valley and foothill grassland. Bristly sedge occurs in microhabitats specified as lake margins and wet places from below sea level to 1,010 meters elevation. Blooms May to September.	**Presumed Absent.** Coastal prairies, and lake margins, and wet places in grassland habitats do not occur in the on-site or off-site Study Areas. The riverine habitat supports marginal habitat for the species, with extensive periods or intermittent flow. Bristly sedge is a perennial rhizomatous herb that is typically 50 to 100 centimeters tall and would have been readily identifiable during the site visits to the on-site and off-site Study Areas that occurred on October 5, 2023, April 16, 2024, and January 28, 2025. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas and only one

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					record within the larger nine quadrangle search area in the California Natural Diversity Database (CNDDB).
Centromadia parryi ssp. parryi Pappose tarplant	--	--	CRPR 1B.2	An annual herb often found on alkaline soil within chaparral, coastal prairie, meadows and seeps, coastal salt marshes and swamps, and vernally mesic valley and foothill grasslands from zero to 420 meters elevation. Blooms May to November.	**Will not occur.** Suitable habitat does not occur in the on-site or off-site Study Areas. While some soil types mapped within the on-site and off-site Study Areas range from neutral to alkaline, suitable habitat types are absent from the on-site and off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Pappose tarplant does not occur in riverine habitats. One documented occurrence of the species is located within five miles of the on-site and off-site Study Area.
Chloropyron palmatum Palmate-bracted bird's-beak	FE	SE	CRPR 1B.1, Yolo HCP/NCCP	An annual hemiparasitic herb found in alkaline wetlands in chenopod scrub, and valley and foothill grassland from five to 155 meters elevation in the Central Valley. Blooms May – October.	**Will not occur.** Alkaline wetlands and suitable habitat types do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Palmate-bracted bird's-beak does not occur in riverine habitats. The on-site and

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					off-site Study Areas are not within modeled habitat for the species. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas.
Cicuta maculata var. bolanderi Bolander's water-hemlock	--	--	CRPR 2B.1	A perennial herb found in coastal salt, fresh, or brackish marshes and swamps from zero to 200 meters elevation. Blooms July to September.	**Will not occur.** Suitable marsh and swamp habitat does not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Bolander's water-hemlock does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Eryngium jepsonii Jepson's coyote thistle	--	--	CRPR 1B.2	A perennial herb that occurs in vernal pools within valley and foothill grassland habitats from three to 300 meters elevation. Blooms April to August.	**Will not occur.** Vernal pool and grassland habitats do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Jepson's coyote thistle does not occur in riverine habitats.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Extriplex joaquinana San Joaquin spearscale	--	--	CRPR 1B.2	San Joaquin spearscale is an annual herb found on alkaline soils, seasonal alkali wetlands or alkali sink scrub in chenopod scrub, meadows, seeps, playas, and valley and foothill grasslands from zero to 835 meters elevation. Blooms April to October. Typically found with saltgrass (Distlichlis spicata) and alkali heath (Frankenia salina).	**Presumed Absent.** Suitable habitat does not occur in the off-site Study Areas. While some soil types mapped within the on-site and off-site Study Areas range from neutral to moderately alkaline, suitable habitat types are present only in the on-site Study Area. However, San Joaquin spearscale would have been identifiable during the site visits to the on-site Study Areas that occurred on October 5, 2023, and April 16, 2024, which includes riverine habitat. An off-site Study Area with suitable alkaline soil in the Tyndall soil series, rated as moderately alkaline, lacks specific microhabitats in grasslands which include seasonal alkali wetland, alkali sink scrub or other alkali habitats. The off-site Study Area, with suitable alkali soil, also lacks species San Joaquin spearscale is typically associated with such as saltgrass and alkali heath. The on-site and off-site Study Areas are also regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Five documented occurrences of the species are located within five miles of the

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					on-site and off-site Study Areas. The nearest CNDDB record occurs approximately 1.3 miles west of the Study Area and west of Pole Line Road. This record documents observations of this plant in an area described as a highly disturbed alkali sink along a channelized slough. The species was observed at this location in 1915, 1927 and 1996.
Fritillaria pluriflora Adobe-lily	--	--	CRPR 1B.2	A perennial bulbiferous herb often found on adobe soils within chaparral, cismontane woodland, and valley and foothill grassland from 60 to 705 meters elevation. Blooms February to April.	**Will not occur.** Adobe soils and suitable habitat types do not occur in the on-site or off-site Study Areas and is below the elevational range of the species. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Adobe-lily does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Hibiscus lasiocarpos var. occidentalis Wooly rose-mallow	--	--	CRPR 1B.2	An emergent, perennial, rhizomatous herb often found in riprap on sides of levees and in freshwater marshes and swamps from zero to 120 meters elevation. Blooms June to September.	**Will not occur.** Marsh and swamp habitat and riprap levees do not occur in the on-site or off-site Study Areas. The riverine habitat in the on-site and off-site Study Areas has earthen-lined banks and fluctuating water levels that coincide with crop production which are unsuitable for the species. The on-site and off-site Study

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Lepidium latipes var. heckardii Heckard's pepper-grass	--	--	CRPR 1B.2	An annual herb found on alkaline soils in vernal pools within valley and foothill grassland habitats from one to 30 meters elevation. Blooms March to May.	**Will not occur.** While some soil types mapped within the on-site or off-site Study Areas range from neutral to alkaline, vernal pools and grasslands do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Heckard's pepper-grass does not occur in riverine habitats. Three documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Lilaeopsis masonii Mason's lilaeopsis	---	--	CRPR 1B.1	A perennial herb that occurs in brackish or freshwater marsh habitats from zero to 10 meters elevation. The species is also known to occur in riparian scrub and in muddy or silty soil formed	**Will not occur.** The on-site and off-site Study Areas are above the known elevational range of the species and marsh habitat is absent. Some riparian scrub is present along the riverine feature in the on-site or off-site Study Areas but

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				through river deposition or riverbank erosion. Blooms April to November.	the on-site and off-site Study Areas is outside of the known range of the species. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Navarretia leucocephala ssp. bakeri Baker's navarretia	--	--	CRPR 1B.1	An annual herb found on adobe or alkaline soils in vernal pools and swales within cismontane woodland, lower montane coniferous forest, meadow, and valley and foothill grassland habitats from three to 1,680 meters elevation. Blooms April to July.	**Will not occur.** While some soil types mapped within the on-site and off-site Study Areas range from neutral to alkaline, suitable habitat types do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Baker's navarretia does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Neostapfia colusana Colusa grass	FT	SE	CE, CRPR 1B.1	An annual herb that occurs on adobe soils in large vernal pools	**Will not occur.** Adobe soils and vernal pools do not occur in the on-site or off-site Study Areas. The on-site and off-site

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				from five to 200 meters elevation. Blooms May to August.	Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Colusa grass does not occur in riverine habitats. Two documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Plagiobothrys hystriculus Bearded popcornflower	--	--	CRPR 1B.1	An annual herb that occurs in vernal pools and swales within valley and foothill grasslands from one to 275 meters elevation. Blooms April to May.	**Will not occur.** Vernal pools and swales do not occur in the on-site or off-site Study Areas and grasslands are absent. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Bearded popcornflower does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Puccinellia simplex California alkali grass	--	--	CRPR 1B.2	An annual herb found in alkaline, vernally mesic areas of sinks, flats, and lake margins within chenopod scrub, meadow, and grassland habitats from one to 915 meters elevation. Blooms March to May.	**Will not occur.** While some soil types mapped within the on-site and off-site Study Areas range from neutral to alkaline, suitable habitat types do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. California alkali grass does not occur in riverine habitats. Eight documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Sidalcea keckii Keck's checkerbloom	FE	--	CRPR 1B.1	An annual herb that occurs on serpentine, clay soils in cismontane woodland and valley and foothill grassland habitats from 85 to 505 meters elevation. Blooms April to May.	**Will not occur.** The on-site and off-site Study Areas are below the known elevational range of the species and suitable soil and habitat types are absent. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Keck's checkerbloom does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Symphyotrichum lentum Suisun Marsh aster	--	--	CRPR 1B.2	A perennial, rhizomatous herb found in marshes and swamps, which can be brackish or freshwater from zero to 15 meters elevation. Blooms April to November.	**Will not occur.** Marsh or swamp habitat does not occur in the on-site or off-site Study Areas and the on-site and off-site Study Areas are above the known elevational range of the species. The on-site and off-site Study Areas are regularly disturbed in association with agricultural



Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Suisun Marsh aster does not occur in riverine habitats. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Trifolium hydrophilum Saline clover	--	--	CRPR 1B.2	An annual herb found in marshes, swamps, and vernal pools in mesic and alkaline valley and foothill grassland habitats from zero to 300 meters elevation. Blooms April to June.	**Will not occur.** Suitable aquatic habitat types do not occur in the on-site or off-site Study Areas and grasslands are absent. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site which likely further limits the potential special-status plants could occur. Saline clover does not occur in riverine habitats. Two documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Tuctoria mucronata Crampton's tuctoria	FR	SE	CRPR 1B.1	An annual herb found in clay bottoms of drying vernal pools and lakes in valley grassland habitat from five to 15 meters elevation. Blooms April to August.	**Will not occur**. Vernal pools and lakes do not occur in the on-site or off-site Study Areas. The on-site and off-site Study Areas are regularly disturbed in association with agricultural activities or landscaped maintenance and herbicide is also known to be used on-site and off-site

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					with likely further limits the potential special-status plants could occur. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas.
Invertebrates					
Bombus crotchii Crotch's bumblebee	--	CE	--	Crotch's bumblebee occurs in grassland and scrub habitats. New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows. Crotch's bumblebee is a generalist forager and has been reported visiting a wide variety of flowering plants. The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the following spring. Crotch's bumble bees are rare throughout their range and are in decline in the Central Valley and southern California. The current known range of the species follows a small strip from western Trinity County south to Tehama County and along the entire Central Valley and coast south of Monterey to the southernmost portions of the State. The range	**May occur.** Suitable grassland or scrub habitat is not present in the on-site or off-site Study Areas. Some plant species suitable for foraging occur along the perimeter of the on-site or off-site Study Areas and in the riverine corridor. Mammal burrows are also present in off-site Study Area, which may provide underground refuge for annual colonies and overwintering queens. However, the on-site and off-site Study Areas have been managed for agriculture or landscaped maintenance and have been subjected to use of herbicides and likely pesticides which are one of the leading causes for decline in bumble bees. Additionally, constant disturbance of soil from agricultural uses is not suitable for underground bee colonies and overwintering queens. Crotch's bumblebee has been historically documented in the vicinity of the on-site and off-site Study Areas but is unlikely to occur in the on-site or off-site Study Areas based on the conditions described above.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				is generally bound on the east by the high Sierra Nevada range and areas east of Bishop, Ridgecrest, and the Salton Sea.	One documented occurrence (#11) of the species is located within five miles of the on-site and off-site Study Areas, with six different years of observations reported within the same nonspecific location in the City of Davis (1949, 1954, 1957, 1959, 1968 and 1998).
Bombus occidentalis Western bumblebee	--	CE	--	Western bumblebee occurs in meadows and grasslands with an abundance of floral resources. Western bumblebee is a generalist forager and have been reported visiting a wide variety of flowering plants. The flight period for queens in California is from early February to late November, peaking in late June and late September. New queens hibernate over the winter and initiate a new colony the following spring. Rare throughout its range and in decline west of the Sierra Nevada crest. The most current known range of the species is limited to areas near the Klamath and northern Coast Range mountains as well as mountain areas in Shasta, Plumas, Sierra, Nevada, Placer, El Dorado, Lassen, Amador, Alpine, and Calaveras counties.	**Not expected.** The on-site and off-site Study Areas are outside of the current known range of the species and suitable habitat types do not occur in the on-site or off-site Study Areas. In addition, the on-site and off-site Study Areas have been managed for agriculture or landscaped maintenance and have been subjected to use of herbicides and likely pesticides which are one of the leading causes for decline in bumble bees. Additionally, constant disturbance of soil from agricultural uses is not suitable for underground bee colonies and overwintering queens. One historical documented occurrence of the species is located within five miles of the on-site and off-site Study Areas. This record documents a nonspecific location in the City of Davis from 1950, 1953, 1963 and 1965.
Bombus pensylvanicus American bumblebee	--	--	CSA	Bumble bees are primitively eusocial insects that live in	**Not expected.** Plant species suitable for foraging occur in the on-site and off-site

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				underground nests made up of one queen, female workers, and reproductive members of the nest. New nests are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows, under rotten logs or under tall grass. American bumblebee occurs in farmlands and open fields, such as grasslands. A long-tongued bumble bee; select food plants include wide variety of flowering plants. The flight period for queens in California is from early March to late November, peaking in June. New queens hibernate over the winter and initiate a new colony the following spring.	Study Areas, especially along the margins of the Study Area and along the margins of riverine habitat. However, the on-site or off-site Study Areas consist primarily of cultivated or managed vegetation communities that are regularly irrigated and routinely disked and otherwise manipulated and managed. The on-site and off-site Study Areas do not provide optimal conditions to support bumble bees that require underground refuge sites or tall dense grass for nesting. Native plant assemblages that would provide suitable habitat for the species are absent and the on-site and off-site Study Areas consisted mostly of bare ground or managed annual or perennial vegetation. Five documented occurrences for the species are located within five miles of the on-site and off-site Study Areas; with the nearest record of the species as a non-specific record located two miles northwest of the City of Davis in 1970.
Branchinecta conservation Conservancy fairy shrimp	FE	--	--	Found in large, clay-bottomed vernal pool playas with turbid water within grassland habitats. Occurs at elevation ranges from five to 145 meters. Endemic to the grasslands of the northern two-thirds of the Central Valley.	**Will not occur.** Suitable wetland habitat types for the species do not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	--	Occurs in a variety of seasonally inundated habitats, especially with grassy or muddy substrates. Typically found in turbid water, but also occurs in clear water with aquatic vegetation. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains.	**Will not occur.** Suitable wetland habitat types for the species do not occur in the on-site or off-site Study Areas. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas.
Branchinecta mesovallensis Midvalley fairy shrimp	--	--	CSA	Occurs in a variety of seasonally inundated habitats, especially shallower vernal pools and swales.	**Will not occur.** Suitable wetland habitat types for the species do not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Cicindela hirticollis abrupta Sacramento Valley tiger beetle	--	--	CSA	Occurs in sandy floodplain habitat in the Sacramento Valley. Requires fine to medium sand, terraced floodplains or low sandy water edge flats.	**Will not occur.** Sandy floodplain habitat does not occur in the on-site or off-site Study Areas. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas.
Danaus plexippus pop. 1 Monarch butterfly – California overwintering population	FPT	--	--	Overwintering populations of monarch butterflies roost in wind protected tree groves, especially Eucalyptus spp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the	**May occur.** The on-site and off-site Study Areas are outside of the winter roost range and does not contain suitable roosting habitat. However, milkweed was observed along the riverine habitat in the on-site Study Area which could provide suitable larval habitat for the species. The species could pass through the on-site and off-site Study Areas during summer migration and

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				leaves of milkweed (Asclepias sp.). Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring. The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east.	use narrow-leaf milkweed plants along the riverine corridor as larval habitat. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Yolo HCP/NCCP	Depends on elderberry shrubs (Sambucus spp.) and typically occurs near rivers or streams. Stems at least a 1-inch diameter or greater are necessary for larvae and pupae development. Adults emerge in spring until early summer and exit holes are visible on shrub stems year-round.	**Will not occur.** Elderberry shrubs do not occur in the on-site or off-site Study Areas or along the immediate perimeter. Several elderberry shrubs are located at the Wildhorse Golf Course restoration area to the west of the on-site or off-site Study Areas but are at least 50 feet from the project boundary. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas. The on-site or off-site Study Areas are not in modeled habitat for the species or in proposed critical habitat.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	--	Occurs in a variety of seasonally inundated habitats, particularly low-alkalinity seasonal pools in grasslands. Known to occur in vernal pools, wetlands, and other freshwater habitats. Generally, occurs in larger, deeper features	**Will not occur.** Suitable wetland habitat types for the species do not occur in the on-site or off-site Study Areas. Four documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.



Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				where dissolved oxygen levels are higher and features remain inundated for longer periods.	
Linderiella occidentalis California linderiella	--	--	CSA	Occurs in a variety of seasonally inundated habitats, especially large, clear, vernal pools. Typically found in seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	**Will not occur.** Suitable wetland habitat types for the species do not occur in the on-site or off-site Study Areas. Two documented occurrences of the species are located within five miles of the on-site and off-site Study Areas.
Myrmosula pacifica Antioch multilid wasp	--	--	CSA	Detailed ecology information on the species is lacking and/or unknown. Known to occur in interior dunes.	**Will not occur.** Interior dunes do not occur in the on-site or off-site Study Areas. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas.
Fish					
Acipenser medirostris pop. 1 Green sturgeon	FT	--	--	Occurs in marine, estuary, and river habitats. Green sturgeon is known to spawn in the Sacramento, Feather, and Yuba rivers; and may also spawn in the Stanislaus and San Joaquin rivers. Spawning occurs in cool sections of rivers with substrate containing small to medium sized sand, gravel, cobble or boulder. Non-spawning adults occupy marine/estuary habitats. The Delta Estuary is important habitat for rearing juveniles.	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. One documented occurrence of the species is located within five miles of the on-site or off-site Study Areas.



Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Archoplites interruptus Sacramento perch	--	--	SSC	Extinct in its native range, all known populations of the species are the result of introductions. Sacramento perch is adapted for life in sloughs, slow moving rivers, and large lakes in the Central Valley, and can tolerate high temperatures and salinities as well as high pH (alkalinity). Extant populations are in reservoirs; the species has been replaced in its native range by introduced game fishes.	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Hypomesus transpacificus Delta smelt	FT	SE	--	Delta smelt are found only from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties. The majority of their life span is spent within the freshwater outskirts of the mixing zone (saltwater-freshwater interface) within the Delta. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse into river channels and tidally-influenced backwater sloughs. They spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced backwater	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				sloughs and channel edge-waters.	
Oncorhynchus mykiss irideus pop. 11 Steelhead, Central Valley DPS	FT	--	--	Distinct population of the Sacramento and San Joaquin rivers and their tributaries. Found in cool, clear, fast-flowing permanent streams and rivers with riffles and ample riparian vegetation cover or overhanging banks. Spawning occurs in streams with pool and riffle complexes. Steelhead requires cold water and gravelly streambed to successfully breed.	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Oncorhynchus tshawytscha pop. 11 Chinook salmon, Central Valley spring-run ESU	FE	SE	--	Chinook salmon spawn in rivers and streams with cool, clear, water and suitable cobble and gravel substrate. Immigration of adults through the Delta and lower Sacramento River occurs from December through July. Spawning is currently limited to the Sacramento River downstream of Keswick Dam and upstream of the Red Bluff Diversion and the lower reaches of Battle Creek. Spawning occurs between late-April through mid-August.	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Pogonichthys macrolepidotus Sacramento splittail	--	--	SSC	Endemic to the Central Valley. They occur below the Red Bluff Diversion Dam in Tehama County to the downstream	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated



Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				reaches of the Sacramento and American rivers. They also occur in the lower reaches of the Feather, Merced, Tuolumne River and the San Joaquin rivers. Sacramento splittail is largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and Sacramento-San Joaquin estuary. Sacramento splittail occurs predominantly in freshwater estuarine systems and prefers low-salinity, shallow-water habitats. Occurs in slow-moving sections of rivers, sloughs, and marshes. Species abundance is strongly tied to outflows because spawning occurs over flooded vegetation.	channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Spirinchus thaleichthys Longfin smelt	FC	ST	--	Inhabits estuaries and bays in the Delta and Sacramento-San Joaquin rivers. Migrates to freshwater to spawn.	**Will not occur.** Suitable aquatic habitat does not occur in the on-site or off-site Study Areas. The on-site or off-site Study Areas support a seasonally inundated channel that appears to hold water in association with agricultural practices and does not provide habitat for special-status fish. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Amphibians					
Ambystoma californiense pop. 1 California tiger salamander	FT	ST	WL, Yolo HCP/NCCP	Requires both aquatic breeding habitat and suitable upland habitat. Typically found in grasslands, meadows, oak savannah, and oak woodland habitats. Adults aestivate in small mammal burrows and other crevices throughout summer, and typically emerge after the first heavy rains to migrate to breeding pools. Breeding takes place in vernal pools, ponds, wetlands, and other freshwater habitats where predators, such as fish, are absent. Adults have been known to inhabit upland habitats 1.24 miles from breeding pools, and juveniles have been known to occur up to two miles from breeding pools.	**Will not occur.** Suitable habitat does not occur in the on-site or off-site Study Areas. Aquatic habitats within the on-site and off-site Study Areas are agricultural drainage ditches and a channelized seasonal stream channel that is seasonally inundated. The agricultural ditches are ephemeral and are altered regularly in association with crop rotation and do not consistently hold water. Suitable upland habitat is also lacking from the on-site and off-site Study Areas which experience regular disturbance in association with farming and landscaping activities. The surrounding area is also developed with urban and agricultural uses, including highways and busy roads. The on-site and off-site Study Areas lack connectivity with suitable habitat for the species or nearby records of the species. The nearest CNDDB record documents one individual adult in 1993 found in a parking lot. The individual was believed to have originated from “West Pond” on the western side of the City of Davis. The on-site or off-site Study Areas are not in modeled habitat for the species.
Spea hammondii Western spadefoot	FPT	--	SSC	Occurs in a variety of open habitats including grasslands, coastal sage scrub, chaparral, sandy washes, and playas. Can	**Will not occur.** Suitable habitat does not occur in the on-site or off-site Study Areas. Aquatic habitats within the on-site and off-site Study Areas are agricultural drainage

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				also be found in valley-foothill woodlands. Western spadefoot spends the majority of its life underground and typically emerges between October to May to breed. Breeding occurs in vernal pools, depressional wetlands, and sometimes puddles. Breeding sites must remain inundated for at least 30 days for larvae to mature.	ditches and a channelized seasonal stream channel that is seasonally inundated. The agricultural ditches are ephemeral and are altered regularly in association with crop rotation and do not consistently hold water. Suitable upland habitat is also lacking from the on-site and off-site Study Areas which experience regular disturbance in association with farming and landscaping activities. The surrounding area is also developed with urban and agricultural uses, including highways and busy roads. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Reptiles					
Actinemys marmorata Northwestern pond turtle	FPT	--	SSC, Yolo HCP/NCCP	Occurs in a variety of aquatic habitats; typically, permanent ponds, lakes, streams, irrigation ditches, canals, marshes, or pools in intermittent drainages. Prefers areas lined with abundant vegetation and either rocky or muddy substrates. Requires basking sites such as logs, rocks, cattail mats or exposed banks. Active from February to November, and breeding occurs from April to May. Overwintering occurs in upland terrestrial habitats close to water sources	**May occur**. Suitable habitat is marginal for the species in the on-site and off-site Study Areas. Agricultural ditches within the on-site Study Area appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water. Such features also lack essential habitat components for the species. The riverine habitat contains sufficient emergent vegetation and basking areas but does not appear to regularly hold water of sufficient depth during the active season of the species and in most years, appears to be completely dry. Northwestern pond turtle

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				(approximately 300 feet), in which they will bury themselves under loose soil.	could occasionally occur in the riverine habitat when sufficiently inundated or in the surrounding uplands, but would generally be expected to occur outside of the on-site or off-site Study Areas in more suitable habitat. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas. This occurrence is located 2.2 miles southwest of the on-site and off-site Study Areas and is from 2001 at UC Davis. The record documents 76 individuals captured during a study, consisting of mostly adults and a few juveniles. The on-site and off-site Study Areas are in modeled habitat that includes aquatic, nesting, and overwintering habitat.
Thamnophis gigas Giant garter snake	FT	ST	Yolo HCP/NCCP	Occurs in aquatic habitats with open, sunny areas for basking, vegetation cover along banks, and abundant prey. Typically occurs in agricultural wetlands, canals, and sloughs; especially near rice fields. Upland habitat with small mammal burrows present above flood level is also required for the species. Giant garter snake is normally found in the immediate vicinity of	**May occur.** Giant garter snake is known to occur in agricultural settings, but the ditches and drainage within the on-site or off-site Study Areas lack vital habitat components for the species. The agricultural ditches appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water. The riverine habitat contains sufficient emergent vegetation but does not appear to regularly hold water and in most years appears to be completely dry during the species active season (Google

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				permanent or semi-permanent sources of water.	Earth 2024). Giant garter snake is generally found in areas with permanent or semi-permanent water and requires water during the active season. Giant garter snake could occasionally occur in the riverine habitat when sufficiently inundated but would generally be expected to occur outside of the on-site and off-site Study Areas in more suitable habitat. A total of 22 documented occurrences of the species are located within five miles of the on-site and off-site Study Areas. The nearest occurrence is located one mile north of the on-site and off-site Study Areas and is from 1987 and occurs along Willow Slough Bypass, which is hydrologically connected to the riverine habitat in the on-site and off-site Study Areas. The record documents two adult snakes. The on-site and off-site Study Areas are in modeled habitat that includes overwintering habitat and active season upland movement habitat.
Birds					
Agelaius tricolor Tricolored blackbird	--	ST	SSC, Yolo HCP/NCCP	Common locally throughout central California. Nests and seeks cover in emergent wetland vegetation, thorny vegetation, and cattails and tules. Nesting	**May occur.** Tricolored blackbird may pass through or forage within the on-site and off-site Study Areas but suitable nesting habitat for the species is marginal within the on-site and off-site Study Areas. The

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. Forages on ground in croplands, grassy fields, flooded land, and edges of ponds.	only potentially suitable nesting habitat is located along the riverine corridor and does not appear to be flooded during the nesting season which may be unsuitable for the species. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas; this record is from 2011 and documents a suspected breeding colony located 1.9 miles north of the on-site and off-site Study Areas. The on-site and off-site Study Areas is in modeled habitat that includes foraging habitat for the species.
Ammodramus savannarum Grasshopper sparrow	--	--	SSC	Occurs in dense grasslands, lowland plains, and in valleys and hillsides of lower mountain slopes. Appears to favor native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	**Will not occur.** Suitable nesting or foraging habitat for the species is not present in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Ardea alba Great egret	--	--	CSA	Common year-round resident of California that nests and roosts in tall trees. Nesting colonies or rookeries occur in tall tree snags or live trees. Great egret may forage up to 10 miles from the rookery. Foraging habitat typically consists of shallow-water feeding or in open fields.	**Not expected.** Suitable rookery habitat is not located within the on-site or off-site Study Areas. Great egret could occur while foraging but because rookery habitat is absent from the on-site and off-site Study Areas, the species is not anticipated to be impacted by the proposed project. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Athene cunicularia Burrowing owl	--	--	SSC, Yolo HCP/NCCP	Occurs in a variety of open habitats; typically grasslands, desert scrub, agricultural fields, washes, and disturbed areas such as golf courses or vacant lots. Burrows, perch sites, and friable soil are necessary for the species, and areas with low-lying, sparse vegetation are preferred. May use culverts, abandoned pipes, rubble piles, and other artificial structures for nesting if burrows are absent. Often associated with high densities of burrowing mammals. Breeding pairs stay near a nesting burrow and wintering owls may move around or roost outside of burrows.	**High.** The on-site or off-site Study Areas contain suitable nesting and foraging habitat for the species in agricultural ditches and along the northwest corner of the on-site and off-site Study Areas along the edge of Wildhorse Golf Course. Small mammal burrows were observed in the on-site and off-site Study Areas and are suitable nesting or wintering sites for the species, and suitable foraging habitat occurs throughout the on-site and off-site Study Areas. In 2004, 2006 and 2009, the species was documented nesting in restored habitat on Wildhorse Golf Course west of the on-site and off-site Study Areas (CDFW 2024). On January 28, 2025, one burrowing owl was observed southeast of the on-site or off-site Study Areas in the adjacent agricultural field at a water pump system. The on-site and off-site Study Areas are in modeled habitat for the species mapped as "Other," which includes mixed pasture, alfalfa and other grassy habitat.
Buteo swainsoni Swainson's hawk	--	ST	Yolo HCP/NCCP	Occurs in a variety of habitats, typically open grassland, riparian, riparian woodland, and agricultural. Nest sites typically occur in riparian areas or in isolated trees bordered by foraging habitat. Most used nest trees in the Central Valley include	**High.** On-site and off-site Study Areas provides suitable foraging habitat for the species and suitable nest trees occur along riverine habitat, along the boundary of the on-site and off-site Study Areas, and are also present in the surrounding area. Swainson's hawk was observed during the site visit conducted on October 5, 2023,

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				valley oak, Fremont's cottonwood, walnut, large willows, and occasionally eucalyptus, pine and redwood trees. Forages in row, hay, and grain crops, especially post-harvest when the height of the vegetation is short and easy to observe prey.	which is after the nesting season for the species, and was observed nesting on-site during the Aquatic Resources Delineation for the site on April 16, 2024. Over 100 documented occurrences of the species are located within a five-mile radius of the on-site and off-site Study Areas. The on-site and off-site Study Areas are in modeled habitat that includes agricultural foraging habitat.
Charadrius nivosus nivosus Western snowy plover	FT	--	SSC	Nests on the ground on broad open beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting. Typically builds nest adjacent to an object including kelp, driftwood, shells, rocks, and even in footprints.	**Will not occur.** Suitable habitat for the species does not occur in the on-site or off-site Study Areas. Recent CNDDB reported occurrences for the species are not located within five miles of the on-site or off-site Study Areas. A historic account of the species is located approximately 1.8 miles northeast of the on-site and off-site Study Areas which documents the species nesting in 1963 at the Davis Sewage Treatment Ponds.
Circus hudsonius Northern harrier	--	--	SSC	Occurs in large tracts of coastal scrub, grassland, marsh, riparian scrub, and wetland habitats with low, dense vegetation. The species is also known to occur in agricultural habitats. Nests on the ground in shrubby vegetation usually at the edge of aquatic habitat.	**High.** Suitable nesting and foraging habitat are present in the on-site and off-site Study Areas. Northern harrier could nest in the riverine habitat or in suitable areas adjacent to the on-site and off-site Study Areas. Suitable foraging habitat is present throughout the on-site and off-site Study Areas but would be limited depending on the current crop rotation.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
					Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT	SE	Yolo HCP/NCCP	An uncommon and rare summer migrant that occurs in riparian forest habitats along large rivers. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of the vegetation. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Will not occur.** Suitable expansive riparian forest habitat does not occur in or near the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas. The on-site or off-site Study Areas are not in modeled habitat for the species.
Elanus leucurus White-tailed kite	--	FP	Yolo HCP/NCCP	Occurs in a variety of habitats including grasslands, savannah, oak woodland, riparian woodland, open suburban areas, and agriculture fields. Nests in lone trees or trees near aquatic habitats. Foraging occurs within un-grazed or lightly-grazed fields, agricultural areas, and open grasslands.	**High.** On-site or off-site Study Areas provide suitable foraging habitat for the species and suitable nest trees occur in on-site and off-site Study Areas, and in surrounding areas where trees are present. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas. The on-site and off-site Study Areas are in modeled habitat that includes primary and secondary foraging habitat.
Falco columbarius Merlin	--	--	WL	An uncommon winter migrant in California; breeds in Alaska and Canada. Uses a variety of	**Not expected**. Merlin does not nest in the region of the on-site or off-site Study Areas. Merlin could occur foraging or

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				habitats but requires trees close to water for cover and is usually found near coastlines, lakeshores, and wetlands.	otherwise dispersing through the on-site and off-site Study Areas in the winter but will not nest on-site. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Laterallus jamaicensis coturniculus California black rail	--	ST	--	Occurs in marsh habitats; typically saltwater or brackish marshes that border bays. However, small, isolated populations are known from the Sierra Nevada foothills. Requires shallow permanent water within the marsh and dense vegetation.	**Will not occur.** The on-site and off-site Study Areas are outside of the current known range of the species. Some emergent wetland vegetation is present within the riverine habitat but the habitat does not contain shallow permanent water and is subject to fluctuating water levels in association with agricultural needs which is unsuitable for the species. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Melospiza melodia pop. 1 Song sparrow "Modesto" population	--	--	SSC	Occurs in the central lower basin of the Great Valley, from Colusa County south to Stanislaus County and east of Suisun Marshes. Occupies habitats containing dense emergent vegetation such as marshes, riparian forests, agricultural canals, and wetlands. Typically nests and occurs in areas dominated by tules, cattails, or willows.	**May occur.** Suitable nesting and foraging habitat are present along the margins of the riverine habitat in trees and shrubs. Suitable emergent wetland vegetation is present along the riverine habitat that could support nesting for the species. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
Plegadis chihi White-faced ibis	--	--	WL	Nests sporadically in the Sacramento-San Joaquin Valley but occurs as a transient throughout California. White-faced ibis requires extensive marshes for nesting and forages in marshes, pastures, and croplands. The species no longer nests regularly in the Central Valley.	**Will not occur.** Suitable habitat for the species does not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Progne subis Purple martin	--	--	SSC	Nests in cavities in open areas with low canopy cover at the height of the nest, near large bodies of water that support high densities of large insects. Martins use a variety of cavities including in bridges, large tree snags, and collapsed lava tubes. Purple martin is very sensitive to competition from European starlings and is extirpated from most low-elevation areas by starlings.	**Will not occur.** Suitable habitat for the species does not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Riparia riparia Bank swallow	--	ST	Yolo HCP/NCCP	Found primarily in riparian and lowland habitat in California. Nests in colonies along cliffs or steep riverbanks in holes. In California, a majority of the population is situated along the Sacramento River and the Feather River. Other smaller populations persist near	**Will not occur.** Suitable habitat for the species does not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas. The on-site and off-site Study Areas are not in modeled habitat for the species.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				Monterey and north of Shasta counties.	
Vireo bellii pusillus Least Bell's vireo	FE	SE	Yolo HCP/NCCP	An obligate riparian species during the breeding season that prefers early successional habitat. Typically found in structurally diverse habitat such as cottonwood-willow forests, oak woodlands, and mule fat scrub that generally contains both canopy and shrub layers and includes some associated upland habitat. Least Bell's vireo will winter in arroyos that contain mesquite scrub habitat and are not limited to willow dominated habitats. Previously considered to be limited to southern California, recent account of the species with successful breeding in Salinas Valley and in Yolo County show that the species is expanding back into its former range.	**Will not occur**. Suitable habitat for the species does not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas. The on-site and off-site Study Areas are not in modeled habitat for the species.
Mammals					
Antrozous pallidus Pallid bat	--	--	SSC	Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to about 6,000 feet. Most common in open, dry habitats with rocky	**Not expected**. Pallid bat may pass through the on-site and off-site Study Areas but because typical habitat types do not occur in the on-site or off-site Study Areas and suitable roosts are also absent, the species is not expected to occur.

Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				areas for roosting; roosts also include cliffs, abandoned buildings, and under bridges.	Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Lasionycteris noctivagans Silver-haired bat	--	--	CSA	Occurs in lower montane coniferous forests, old growth forests, and riparian woodlands. Roosts in hollow trees, beneath exfoliating bark, in abandoned woodpecker holes, and rarely in rock outcrops. They primarily occur in coastal and montane forests, feeding over streams, ponds, and open brushy areas.	**Will not occur.** Suitable forest and riparian habitats do not occur in the on-site or off-site Study Areas. Documented occurrences of the species are not located within five miles of the on-site or off-site Study Areas.
Lasiurus cinereus Hoary bat	--	--	CSA	Occurs in cismontane woodland, coniferous forest, and broadleaf upland forest habitats. Requires a water source and appears to prefer open habitats or habitat mosaics within the forest. Roosts in dense foliage of medium to large trees.	**Will not occur.** Suitable forest habitat does not occur in the on-site or off-site Study Areas. One documented occurrence of the species is located within five miles of the on-site and off-site Study Areas. The record documents multiple collections of the species that were preserved at the Museum of Vertebrate Zoology from 1925 to 1991.
Taxidea taxus American badger	--	--	SSC	Occurs in a variety of dry, open habitats including grasslands, open woodlands, shrublands, and open chaparral. Loose, friable soil is required for the species to dig den sites. Needs sufficient food, friable soils and open, uncultivated ground.	**Will not occur.** Suitable habitat does not occur in the on-site or off-site Study Areas which is regularly cultivated and disturbed in association with farming and landscaping activities. Additionally, the surrounding area is developed for agriculture or is urban and lacks connectivity to suitable habitat for the species.



Table 4.4-2
Special-Status Species in the Region to Occur in the Study Area

Scientific Name (Common Name)	Federal Status	State Status	CRPR Status/Yolo HCP/NCCP	Habitat, Ecology, and Life History	Potential to Occur
				Typically found in areas away from human activity.	One undated record of the species has been listed in the CNDDB that documents the species in the City of Davis. The specimen is preserved in the Museum of Vertebrate Zoology.

1 Sensitive species reported in CNDDB or CNPS on the "*Dixon, Merritt, Davis, Sacramento West, Woodland, Grays Bend, Taylor Monument, Clarksburg, and Saxon*" USGS quads, or in the USFWS list for the Study Area.

2 Status is as follows: Federal (ESA) listing/State (CESA) listing/other CDFW status or CRPR. F = Federal; S = State of California; E = Endangered; T = Threatened; C = Candidate; P = Proposed; FP=Fully Protected; SSC=Species of Special Concern; WL=Watch List; CSA= California Special Animal; Yolo HCP/NCCP = Yolo HCP/NCCP Covered Species.

3 Status in the Study Area is assessed as follows. **Will Not Occur**: Species is either sessile (*i.e.* plants) or so limited to a particular habitat that the species cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the Study Area; **Not Expected**: Species moves freely and might disperse through or across the Study Area, but suitable habitat for residence or breeding does not occur on the Study Area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the Study Area; however, focused surveys conducted for the current project were negative; **May Occur**: Species was not observed on the site and breeding habitat is not present but the species has the potential to use the site for dispersal, **High**: Habitat suitable for residence and breeding occurs on the Study Area and the species has been recorded recently on or near the Study Area, but was not observed during surveys for the current project; **Present**: The species was observed during biological surveys for the current project and is assumed to occupy the Study Area or use the Study Area during some portion of its life cycle.

CRPR = California Rare Plant Rank: 1B to rare, threatened, or endangered in California and elsewhere; 2B to rare, threatened, or endangered in California but more common elsewhere. Extension codes: .1 to seriously endangered; .2 to moderately endangered.

Source: HELIX Environmental Planning, 2025.



Potential habitat for Crotch's bumble bee in the on-site and off-site Study Areas has been subjected to the use of herbicides and likely pesticides which are one of the leading causes for decline in bumble bees. Additionally, constant disturbance of potential habitat from agricultural uses or landscape management is not suitable for underground colonies and overwintering queens, which are routinely disturbed and do not provide habitat for the species. Ground squirrel (*Otospermophilus beecheyi*) burrows were observed within the Study Area that provide potential nesting/refuge habitat within the Study Area. One documented occurrence (#11) of the species occurs within five miles, with six different years of observations reported within the same nonspecific location in the City of Davis (1949, 1954, 1957, 1959, 1968, and 1998). Crotch's bumble bee could pass through the Study Area while foraging, overwinter in burrows, and use burrows to support annual colonies.

Monarch Butterfly

Monarch Butterfly is a federal candidate species for listing. Monarch butterflies roost in wind-protected tree groves with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed. Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring. The overwintering population is located along the coast, while summer breeding areas occur in interior California and North America, with spring breeding areas located further east.

Overwintering habitat is not present in the Study Area. In addition, CNNDB records for the species do not occur within a five-mile radius of the Study Area, and most records are located along the coast (CDFW 2024). Overwintering habitat is not present in the Study Area and the Study Area is not within proposed critical habitat, which is limited to coastal areas. However, narrow-leaf milkweed (*Asclepias fascicularis*), a larval host plant, is abundant along portions of the riverine habitat in the Study Area and could provide larval habitat for the Monarch butterfly during summer migration. The Study Area is in the summer breeding range of the Monarch butterfly and not in the coastal overwintering range.

The species could pass through the Study Area during summer migration and use narrow-leaf milkweed plants along the riverine corridor as larval habitat.

Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata*) is proposed for federal listing as threatened and is a CDFW Species of Special Concern and a Yolo HCP/NCCP Covered Species. Northwestern pond turtles are most commonly found in permanent or nearly permanent wetlands, ponds, slow-moving streams, and irrigation. Adjacent upland areas are also used for basking and egg-laying. Special habitat features that improve turtle abundance, survival, and reproductive success are rocks, logs, open mud banks, emergent aquatic vegetation, and streamside vegetation. The foregoing features provide the turtles with basking sites and cover from predators. Although pond turtles feed primarily on aquatic invertebrates, they also feed on plants, small fish, and carrion.

The Study Area is in modeled habitat for the species under the Yolo HCP/NCCP that includes aquatic, nesting, and overwintering habitat. One CNDDB reported occurrence of the species occurs within a five-mile radius of the Study Area; this occurrence is located 2.2 miles southwest of the Study Area and is from 2001 at UC Davis. The record documents 76 individuals captured during a study, consisting of mostly adults and a few juveniles.

Suitable habitat is marginal for the species in the Study Area and is limited to the riverine habitat. Agricultural ditches within the Study Area appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water. The features also lack essential habitat components for the species. The riverine habitat contains sufficient emergent vegetation and basking areas but does not appear to regularly hold water of sufficient depth during the active season of the species and in most years appears to be completely dry. The species could occasionally occur in the riverine habitat when sufficiently inundated or in the surrounding uplands but would generally be expected to occur off-site in more suitable habitat.

Giant Garter Snake

The giant garter snake is listed as threatened federally and under CESA, and is a Yolo HCP/NCCP Covered Species. Giant garter snake is endemic to the San Joaquin and Sacramento Valleys and inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low-gradient streams, and adjacent uplands. Giant garter snake requires adequate water during its active season (May through October) to provide food and cover, emergent, herbaceous wetland vegetation for foraging and cover, grassy banks and openings in waterside vegetation for basking, and higher elevation uplands for cover and refuge from flood waters during its dormant season (winter). The species inhabits small mammal burrows and other soil crevices with sunny exposure along south and west-facing slopes, above prevailing flood elevations when dormant. Giant garter snake is primarily found in marshes, sloughs, and slow-moving creeks.

The Study Area is in modeled habitat for the species under the Yolo HCP/NCCP that includes overwintering habitat and active season upland movement habitat. Twenty-two documented occurrences of the species occur within five miles of the Study Area. The nearest occurrence is from 1987 and is located one mile north of the Study Area along Willow Slough Bypass, which is hydrologically connected to the Study Area. The record documents two adult snakes.

The species is known to occur in agricultural settings, but the ditches and drainage within the Study Area lack vital habitat components for the species. The agricultural ditches appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water. The riverine habitat contains sufficient emergent vegetation but does not appear to regularly hold water and, in most years, appears to be completely dry during the species' active season. The species requires water during its active season and is generally found in areas with permanent or semi-permanent water. The species could occasionally occur in the riverine habitat when sufficiently inundated but would generally be expected to occur off-site in more suitable habitat.

Tricolored Blackbird

Tricolored blackbird is listed as Threatened by CDFW and is a CDFW Species of Special Concern and a Yolo HCP/NCCP Covered Species. Tricolored blackbirds nest and seek cover in emergent wetland vegetation and thorny vegetation such as Himalayan blackberry (*Rubus armeniacus*), cattail (*Typha* spp.), willow (*Salix* spp.), and tules (*Scirpus* spp.). The nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. The species forages on the ground in croplands, grasslands, flooded land, and edges of ponds for insects. Breeding sites must include open accessible water, protected nesting substrate, flooded, thorny, or spiny vegetation, and suitable foraging space providing adequate insect prey within a few miles of the nesting colony.

The Study Area is modeled habitat for the species under the Yolo HCP/NCCP that includes foraging habitat for the species. One CNDDB reported occurrence of the species occurs within a five-mile radius of the Study Area; this record is from 2011 and documents a suspected nesting colony located 1.9 miles north of the Study Area.

The species may pass through or forage within the Study Area but suitable nesting habitat for the species is marginal within the Study Area. The only potentially suitable nesting habitat is located along the riverine corridor and does not appear to be flooded during the nesting season, which may be unsuitable for the species. The entire Study Area provides suitable foraging habitat for the species.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not federally listed, but is a candidate for listing under CESA. The species is also designated as a CDFW Species of Special Concern and is a Yolo HCP/NCCP Covered Species. Burrowing owls are often found in open, dry grasslands, agricultural and range lands, and desert habitats. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. Burrowing owls occur at elevations ranging from 200 feet below mean sea level (bmsl) to over 9,000 feet amsl. In addition to natural habitats, burrowing owls can be found in urban habitats such as at the margins of airports and golf courses and in vacant urban lots. Burrowing owls forage in adjacent grasslands and other suitable habitats primarily for insects and small mammals, and less often for reptiles, amphibians, and other small birds.

The Study Area is in modeled habitat for the species under the Yolo HCP/NCCP and is mapped as “Other,” which includes mixed pasture, alfalfa, and other grassy habitat. In 2004, 2006, and 2009, the species was documented nesting in restored habitat on Wildhorse Golf Course immediately west of the Study Area.

The Study Area provides suitable habitat for the species along the margins of the Study Area where small mammal burrows are present. The interior of the Study Area is agricultural land, which is routinely disturbed and does not provide a habitat for the species. Ground squirrel (*Otospermophilus beecheyi*) burrows were observed within the Study Area that provide suitable nesting/refuge habitat, and rubble piles, culverts, and other artificial structures that may also be suitable for the species exist within the Study Area. Whitewash, feathers, pellets, or other burrowing owl sign were not observed in the Study Area during the initial survey. Following the initial survey, protocol-level surveys were conducted within the Study Area and a 500-foot buffer to determine the presence or absence of the species. Surveys have been conducted on March 27, 2024, April 19, 2024, May 10, 2024, June 21, 2024, September 23, 2024, October 9, 2024, November 21, 2024, and November 27, 2024. Burrowing owls or evidence of occupancy were not observed during the protocol surveys to date. Protocol surveys were completed in January 2025, and burrowing owls were not observed during protocol burrowing owl surveys. However, on January 28, 2025, one burrowing owl was observed southeast of the Study Area in the adjacent agricultural field at a water pump system. The species, or sign of its occupancy, has not been observed in the Study Area to date but has been identified as present during the wintering season adjacent to the Study Area. However, until suitable habitat is removed from the Study Area, the species still has potential to occur.

Swainson’s Hawk

Swainson’s hawk is listed as threatened by CDFW and is a Yolo HCP/NCCP Covered Species. Swainson’s hawk is a long-distance migrant with nesting grounds in western North America, and



wintering grounds in Mexico and South America. Swainson's hawks typically arrive in the California Central Valley between March and early April to establish breeding territories, breeding occurs from late March to August. In the Central Valley, Swainson's hawks generally nest in isolated trees, small groves of trees in agricultural land, or large woodlands next to open grasslands or agricultural fields. The species typically nests near riparian areas; however, it has been known to nest in urban areas as well. In the Central Valley, the most commonly used trees include Fremont's cottonwood (*Populus fremontii*), sycamores (*Platanus* spp.), valley oaks (*Quercus lobata*), walnut (*Juglans* spp.), and occasionally gum trees (*Eucalyptus* spp.), redwood (*Sequoia* spp.) and pine (*Pinus* spp.). Nest locations are usually near suitable foraging habitats, which include fallow fields, all types of grasslands, irrigated pastures, alfalfa and other hay crops, and low-growing row crops.

The Study Area is modeled habitat for the species under the Yolo HCP/NCCP that includes agricultural foraging habitat. The species was observed in the Study Area during the site visit conducted on October 5, 2023, which is after the nesting season for the species, and was observed nesting adjacent to the Study Area on April 16, 2024. Over 100 documented occurrences of the species occur within a five-mile radius of the Study Area.

The entire Study Area provides suitable foraging habitat for the species and suitable nest trees occur along the riverine habitat, along the boundary of the Study Area, and are also present in the surrounding vicinity. The species was observed soaring over the site in 2023 and was observed nesting adjacent to the Study Area in 2024 and has a high likelihood of occurring in the future.

The presence of suitable nesting habitat for Swainson's hawk was assessed within 0.5-mile of the Study Area, where accessible. Aerial imagery, as well as windshield surveys, found an abundance of suitable nest trees for Swainson's hawk within 0.5-mile of the Study Area. Suitable nest trees are present in residential neighborhoods to the west and south of the Study Area, along the unnamed drainage and Wildhorse Golf Course to the west of the Study Area, and along agricultural roads to the north of the Study Area. Suitable nest trees are not present to the east of the Study Area. Although most of the trees are located within residential areas or along roadways, Swainson's hawk has been known to nest in trees in residential and suburban areas, as well as along roadways. Documented nests are not located within 0.5-mile of the Study Area in the CNDDB, but suitable nesting habitat is abundant within the buffer.

Northern Harrier

Northern harrier *(Circus cyaneus)* is not listed, pursuant to either the FESA or CESA. The species is a CDFW Species of Special Concern. Northern harrier is widespread throughout North America, from southern Canada to northern Mexico, and is a year-round resident in California. Northern harrier is considered to be somewhat nomadic and will range widely even during nesting season. Northern harriers breed in a variety of open habitats, including marshes, wet meadows, weedy shorelines, grasslands, weed fields, pastures, sagebrush flats, desert sinks, and croplands. Northern harriers nest on the ground in patches of dense, tall vegetation in undisturbed areas. Breeding occurs from March to August. Northern harriers feed on a wide variety of vertebrate prey, including rodents, songbirds, waterfowl, and lizards).

Documented occurrences of the species do not occur within five miles of the Study Area; however, the species is not regularly reported to the CNDDB.

Suitable nesting and foraging habitat for the species are present in the Study Area. The species could nest in the riverine habitat or in suitable areas adjacent to the Study Area. The interior of the Study Area is not suitable nesting habitat for the species due to the area's disturbed nature. Suitable foraging habitat is present throughout the Study Area but would be limited depending on the current crop rotation. The species generally forages in undisturbed grassland or marsh habitats but could use the Study Area for foraging during periods of low-growth where prey species would be visible.

White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is a Fully Protected species by CDFW and is a Covered Species under the Yolo HCP/NCCP. White-tailed kite is a year-round resident in California in coastal areas and lowlands in the Central Valley. White- tailed kites prefer open stages of habitats dominated by herbaceous species and will nest in tall trees adjacent to foraging habitat. White-tailed kites feed mainly on small mammals such as voles but will take other small vertebrate and invertebrate prey.

The Study Area is in modeled habitat for the species under the Yolo HCP/NCCP that includes primary and secondary foraging habitat. Documented occurrences of the species do not occur within five miles of the Study Area; however, the species is not regularly reported to the CNDDB.

The entire Study Area provides suitable foraging habitat for the species and suitable nest trees occur along the edge of the riverine habitat, along the border of the Study Area, and are also present adjacent to the Study Area.

Modesto Song Sparrow

Modesto song sparrow (*Melospiza melodia*) is not listed, pursuant to either the FESA or CESA. The species is a CDFW Species of Special Concern. Song sparrows are common throughout California except for high mountains and the southern deserts. The "Modesto" population of song sparrow, formerly considered a separate subspecies, is restricted to the north-central portion of the Central Valley from the Butte Sink to the Sacramento-San Joaquin Delta. The "Modesto" population is strongly associated with emergent freshwater marshes, early successional riparian willow thickets, and riparian stands of valley oak with a dense understory of Himalayan blackberry. Suitable habitat requires dense vegetation within one meter of the ground for nesting, standing or flowing water, and patches of open ground for foraging.

Documented occurrences of the species do not occur within five miles of the Study Area. Suitable nesting and foraging habitat for the species are present in the Study Area along the margins of the riverine habitat in trees and shrubs. Suitable emergent wetland vegetation is present along the riverine habitat that could support nesting for the species.

Trees

As detailed below in the Methods of Analysis section, HELIX conducted an arborist survey of trees within or overhanging the Study Area and the off-site areas, and subsequent to the arborist survey being prepared, the project engineers, CBG Civil Engineers, prepared an existing tree inventory sheet summarizing the data included in the arborist survey. Existing trees within the Study Area and off-site areas include native and non-native trees located along East Covell Boulevard and along the west boundary of the site, as well as non-native and native riparian trees located along either side of the intermittent drainage channel.

A total of 166 trees were recorded, inclusive of 141 trees within or overhanging the Study Area (on-site trees) and a total of 25 trees within the off-site areas. Table 4.4-3 summarizes the trees recorded within the Study Area and off-site areas.

Table 4.4-3
Trees Recorded Within the Study Area and Off-Site Areas

Tree Species	Number of Trees		
	Study Area	Off-Site Areas	Total
Ash (*Fraxinus sp.*)	18	--	18
Black walnut (*Juglans nigra*)	37	5	42
Bradford pear (*Pyrus calleryana*)	1	--	1
California buckeye (*Aesculus californica*)	--	1	1
California date palm (*Phoenix dactylifera*)	1	--	1
Ceanothus (*Ceanothus sp.*)	--	--	--
Chinaberry tree (*Melia azedarach*)	--	--	--
Chinese elm (*Ulmus parvifolia*)	3	--	3
Chinese tallow (*Tradica sebifera*)	2	2	4
Coast live oak (*Quercus wislizeni*)	2	2	4
Common hackberry (*Celtis occidentalis*)	1	1	2
Cottonwood (*Populus fremontii*)	6	--	6
Elderberry (*Sambucus mexicana*)	--	--	--
Elm (*Ulmus sp.*)	--	--	--
English walnut (*Juglans regia)*	3	1	4
Golden Rain (*Koelrueteria paniculata*)	29	--	29
Maple (*Acer sp.*)	--	1	1
Olive (*Olea europaea*)	1	--	1
Prunus (*Prunus sp.*)	--	--	--
Sycamore (*Platanus racemosa*)	6	8	14
Toyon (*Heteromeles arbutifolia*)	1	--	1
Tree of heaven (*Ailanthus altissima*)	5	--	5
Unknown/unidentifiable trees	3	--	3
Valley oak (*Quercus lobata*)	15	3	18
Willow (*Salix sp.*)	7	1	8

Source: CBG Civil Engineers, 2025.

4.4.3 REGULATORY CONTEXT

A number of federal, State, and local policies provide the regulatory framework that guides the protection of biological resources. The following discussion summarizes those laws that are most relevant to biological resources in the vicinity of the project site.

Federal Regulations

The following are the federal environmental laws and policies relevant to biological resources.

Federal Endangered Species Act

The U.S. Congress passed the FESA in 1973 to protect species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3[3], [19]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] Section 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR Section 17.3). Actions that result in take can result in civil or criminal penalties.

Section 10 requires the issuance of an "incidental take" permit before any public or private action may be taken that could take an endangered or threatened species. The permit requires preparation and implementation of an HCP that would offset the take of individuals that may occur, incidental to implementation of a proposed project, by providing for the protection of the affected species.

Pursuant to the requirements of FESA, a federal agency reviewing a project within the jurisdiction of the agency must determine whether any federally listed threatened or endangered species may be present on-site and whether the proposed project will have a potentially significant impact on such species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 U.S. Code [USC], Section 1536[3], [4]).

For federally listed species covered under the Yolo HCP/NCCP, the Biological Opinion issued by the USFWS for the Yolo HCP/NCCP provides take coverage for covered projects. Further consultation is not required as long as the covered project complies with Yolo HCP/NCCP requirements. For federally listed species that are not Yolo HCP/NCCP Covered Species, take coverage is required as outlined below.

In the context of the proposed project, FESA consultation with USFWS or the NMFS would be initiated if development would result in take of a threatened or endangered species not covered under the Yolo HCP/NCCP or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species not covered under the Yolo HCP/NCCP or adversely modify critical habitat of such a species.

Migratory Bird Treaty Act

Raptors (birds of prey), migratory birds, and other avian species are protected by a number of State and federal laws. The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior.

Clean Water Act

The United States Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). "Discharge of

fill material" is defined as the addition of fill material into waters of the U.S., including but not limited to, the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for the construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 CFR Section 328.2[f]). In addition, Section 401 of the CWA (33 USC, Section 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments, such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Section 328.3[b]).

Furthermore, jurisdictional waters of the U.S. can be defined by exhibiting a defined bed and bank and OHWM. The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

State Regulations

The following are the State environmental laws and policies relevant to biological resources.

California Department of Fish and Wildlife

CDFW administers a number of laws and programs designed to protect fish and wildlife resources under the California Fish and Game Code (CFGC), such as CESA (CFGC Section 2050, et seq.), Fully Protected Species (CFGC Section 3511), and the Lake or Streambed Alteration Agreement (LSAA) Program (CFGC Sections 1600 to 1616). Such regulations are summarized in the following sections.

California Endangered Species Act

The State of California enacted CESA in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. Candidate species under the CESA are defined as native plant or animal species being considered for addition to the State's endangered or threatened species list. CESA requires State agencies to consult with CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that "overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

As with FESA, for covered projects that may impact State-listed species under CESA that are also Covered Species under the Yolo HCP/NCCP, direct consultation with CDFW for State-listed take authorization is not required as long as the covered project complies with Yolo HCP/NCCP requirements. For projects that may result in take of State-listed species that are not Yolo

HCP/NCCP Covered Species, CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows 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 (CFGC Section 2081).

California Fish and Game Codes

A number of species have been designated "Fully Protected" species under Sections 5515, 5050, 3511, and 4700 of the CFGC, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of Fully Protected species is prohibited. The CFGC defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Birds of prey are protected in California under provisions of the CFGC Section 3503.5 (1992), which states, "it is unlawful to take, possess, or destroy any birds in the order 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." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by CDFW.

Lake or Streambed Alteration Program

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, CFGC Section 1602 requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, State or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream, or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams, and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, the CDFW will require that the parties enter into a LSAA.

CDFW Species of Special Concern

In addition to formal listings under FESA and CESA, plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern" developed by CDFW. Species whose numbers, reproductive success, or habitat may be threatened are tracked by CDFW in California.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. Currently, 64 species, subspecies, and

varieties of plants are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations, emergencies, and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the federal CWA. Although the CWA is a federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Quality Control Boards (RWQCBs) are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within waters of the U.S., and also implements the State's wetland protection and hydromodification regulation program under the Porter-Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Plan. The Procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review, and approval of applications for WQCs and Waste Discharge Requirements (WDR) for dredge or fill activities. The State Office of Administrative Law (OAL) approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code Section 13050[e]), "waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to waters of the State, which includes waters of the U.S. and non-federal waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollutant Discharge Elimination System (NPDES) permits, Section 401 WQC, or other approvals.

Local Regulations

The following are the local environmental laws and policies relevant to biological resources.

Yolo County Habitat Conservation Plan and Natural Community Conservation Plan

The Yolo HCP/NCCP, which was adopted in January 2019, is a 50-year regional plan that provides for the conservation of 12 Covered Species and the natural communities and agricultural land on which they depend, while allowing for orderly development in Yolo County consistent with local general plans. The following six local agencies prepared the Yolo HCP/NCCP: the Yolo Habitat Conservancy, County of Yolo, City of Davis, City of West Sacramento, City of Winters, and City of Woodland. The Yolo HCP/NCCP only applies to eligible projects, also known as Covered Activities, undertaken within the Yolo HCP/NCCP Plan Area, which includes all areas within Yolo County, including the incorporated cities of Davis, West Sacramento, Winters, and Woodland.

The Yolo HCP/NCCP provides the basis for issuance of long-term permits under FESA and the California Natural Community Conservation Planning Act (NCCPA) that cover an array of public and private activities, including activities that are essential to the ongoing viability of Yolo County's agricultural and urban economies. Specifically, the Yolo HCP/NCCP provides permittees (i.e., Yolo County, the four incorporated cities, and the Yolo Habitat Conservancy) with incidental take permits from both USFWS and CDFW for the 12 Covered Species, pursuant to Section 10(a)(1)(B) of the FESA and Section 2835 of the NCCPA chapter of the CFGC. The Yolo HCP/NCCP ensures compliance with the FESA, NCCPA, and CESA for Covered Activities that may affect Covered Species.

In addition to the permittees, the Yolo HCP/NCCP permits may cover the activities of other entities through certificates of inclusion obtained by completing the Yolo HCP/NCCP application process. The Yolo Habitat Conservancy charges various types of fees to cover implementation costs, including administration, land acquisition, restoration, and land management costs. Yolo HCP/NCCP applicants can either pay mitigation fees for land cover conversion, or conduct wetland restoration, and/or dedicate land in-lieu of the fees. Wetland restoration and land-in-lieu proposals must be reviewed and approved by the Yolo Habitat Conservancy. If an applicant opts to pay the mitigation fees, the Yolo Habitat Conservancy applies an adopted land cover fee schedule, with additional fees for wetlands. Fees are automatically increased annually, adjusted for inflation. Additionally, every five years, the Yolo Habitat Conservancy completes a fee assessment to review costs, underlying assumptions, and actual costs. After the review, fee schedule adjustments are made, and automatic annual increases resume based off the five-year fee assessment.

Yolo Regional Conservation Investment Strategy/Local Conservation Plan

The Yolo Regional Conservation Investment Strategy/Local Conservation Plan (RCIS/LCP) complements the Yolo HCP/NCCP by providing a voluntary, non-regulatory framework for the conservation of natural communities and certain sensitive species not covered by the Yolo HCP/NCCP. The RCIS/LCP establishes conservation priorities and provides guidelines for avoidance, minimization, and mitigation measures that conserve Yolo County's biological resources. Though the Yolo RCIS/LCP benefits many of the species and natural communities included in the Yolo HCP/NCCP, because the RCIS/LCP is voluntary and non-regulatory, the plan does not generally provide the same level of protection for covered species and natural communities as the Yolo HCP/NCCP.

City of Davis General Plan

The City of Davis General Plan biological resource policies that are applicable to the proposed project are presented below.

Habitat and Natural Areas Chapter

Goal HAB 1 Identify, protect, restore, enhance and create natural habitats. Protect and improve biodiversity consistent with the natural biodiversity of the region.

Policy HAB 1.1 Protect existing natural habitat areas, including designated Natural Habitat Areas.

Policy HAB 1.2 Enhance and restore natural areas and create new wildlife habitat areas.

City of Davis Tree Ordinance

The City of Davis regulates tree planting and removal within the community in Davis Municipal Code Chapter 37, Tree Planting, Preservation and Protection. Article 37.01 of the Municipal Code contains the administrative provisions, the pertinent sections of which are as follows:

Section 37.01.020 Definitions

City tree means any tree within the ten-foot easement on private property planted by the city, and trees in the city's public right-of-way, parks, greenbelts, and property owned by the city. City trees are maintained by the city, except as otherwise stated in Chapter 37.

Landmark tree means a tree that has determined by resolution of the city council to be of high value because of its species, size, age, form, historical significance, or some other professional criterion.

Private/protected tree means any tree privately owned and growing on private property, which is protected under this article, such as landmark trees and/or trees of significance. The exception being trees on single-family or duplex dwelling properties where trees were not preserved by conditions of approval, part of a planned development zone project description, nor is the property associated with any active applications for building permits or discretionary project reviews.

Tree means any woody perennial plant having one or several main stems commonly achieving ten or more feet in height and capable of being pruned and shaped to develop a branch-free trunk at least nine feet in height. Reference to any tree indicates the entire plant, including both visible (canopy, trunk) and below grade (roots).

Tree of significance means any tree, which measures five inches or more in diameter (DBH) located on property that is used for commercial, multi-family housing or residential care facilities, or in publicly accessible common space controlled by a Homeowner's Association.

In addition, Davis Municipal Code Article 37.03 contains the criteria for landmark trees and trees of significance, the pertinent sections of which are as follows:

37.03.020 Landmark tree designation criteria

(a) Any person may and is encouraged to submit a proposal to designate a tree as a landmark tree. Property owners of trees under consideration shall be notified that a proposal has been submitted and shall have the opportunity to participate in the

designation process. Proposals shall be reviewed by the director and sent to a city council advisory commission for its review. Upon recommendation of the advisory commission and approval of the city council, a tree may be designated as a landmark tree if it meets any of the following criteria:

(1) The tree is an outstanding specimen of a desirable species;
(2) The tree is one of the largest or oldest trees in Davis;
(3) The tree is of historical interest;
(4) The tree is of distinctive form; or,
(5) The tree is an unusual species, significant grove or is otherwise unique.

(b) The director shall notify, in writing, the person who submitted the proposal and the tree owner (if different from the applicant) of the City Council's decision.

37.03.060 Landmark trees and trees of significance – Removal or modification associated with building permits or discretionary projects

(a) This section shall govern requests for removal or modification of landmark trees and trees of significance, except those not subject to this article under Section 37.03.010, in all cases where removal or modification is for the purpose of: (1) constructing or adding to a structure, including, but not limited to, fences, sheds, decks and retaining walls; (2) providing parking; (3) trenching; or (4) any other activity requiring approval of a building permit or any discretionary project.

(b) An application for a building permit or discretionary permit, when there are landmark trees or trees of significance exist on or within fifteen feet of the site, shall include with the project plans a tree preservation plan consisting of the following:

(1) A scale drawing that designates the location, species, and trunk diameter measured at DBH of applicable trees on the site, with each tree's tree protection zone accurately depicted, and indicates the landmark tree(s) and/or tree(s) of significance proposed for removal or modification.
(2) Location of proposed existing structures and/or improvements, including, but not limited to, trenching, paving grade changes, building heights, etc.
(3) Project contact (name, phone, and address) who shall be responsible for implementing and maintaining the approved tree protection plan consistent with Section 37.05.010.
(4) Photos of the general site conditions may be required to be submitted with the project plans. Existing trees may be required to be located in the field by a licensed surveyor and reflected on the project plans.

(c) Independent Arborists Report. At the expense of the applicant, an independent arborist's report may be required when there are landmark trees or trees of significance exist on or within fifteen feet of the site, which shall contain specific information on tree location, health, and condition, an analysis of potential impacts of development, recommended actions, mitigation measures (as defined in this section), and monitoring regarding one or more trees on an individual lot or project site. Independent arborist's report may be required in, but is not limited to, the following circumstances:

(1) When a particularly valuable species is involved in the project;
(2) When more than three trees will be affected;
(3) When there is a highly visible impact to the tree canopy;
(4) When a highly visible tree will be affected;
(5) When a tree(s) that is shared or enjoyed by more than one property owner is involved; or

(6) When circumstances could put an existing tree at risk and require an arborist's recommendation for prudent care.

(d) Conditions of approval for landmark tree or tree of significance removal or modification permits associated with building permits of discretionary approvals. A bond or other security satisfactory to the city may be required as a condition of approval of application for a building permit or discretionary permit, when there are landmark trees and/or trees of significance exist on or within fifteen feet of the site, as provided in Section 37.02.040(d).

(e) Applications shall be considered, and a determination made regarding whether or not and under what conditions the permit should be granted by the entity or official listed below:

(1) By the planning commission, as part of any application requiring planning commission approval;
(2) By the community development director, or designee, for any tree permit associated with a building permit, or any discretionary project application requiring approval by the community development department.

(f) The following standards and provisions shall be considered when evaluating a permit under this section:

(1) The design and placement of development should attempt to incorporate existing healthy trees into the site design.
(2) If a tree(s) is to be removed, the removal shall be mitigated in accordance with the following, as provided in the permit:

(A) Replanting a Tree(s) On-Site. Trees shall be planted and maintained in number and size so that there is no net loss in tree diameter at breast height (DBH). For example, if one tree is removed with a twelve-inch DBH size, mitigation may consist of a replacement of equal size, two trees each measuring six-inch DBH, or four trees each measuring three-inch DBH. The replanted tree(s) shall be minimum five-gallon size and of a species that will eventually equal or exceed the removed tree in size.
(B) Replanting a Tree(s) Off-Site. If there is insufficient space on the property for replacement tree(s), required planting and maintenance shall occur on another property owned by the applicant, or in city-owned open space or park, subject to the approval of the city arborist and authorized property owners.
(C) Payment to the Tree Preservation Fund in Lieu of Replacement. If, in the city arborist's determination, no feasible alternative exists to plant the required mitigation, or there are other considerations for alternative mitigation, the applicant shall pay into the tree preservation fund an amount determined by the director based upon the ISA appraisal guidelines or other approved method. If the director approves another method of appraisal guidelines the director shall publish notice of that approval and notify the permit applicant at the time the permit application is issued.

(3) Removal or modification shall not be approved unless the reviewing entity or official finds one of the following:

(A) The tree(s), due to its location in respect to topography and required setbacks and easements, prevents reasonable development of permitted uses. Existing development on similar sites in the same zone and having similar

characteristics shall be considered when determining reasonable development of permitted uses.

(B) The condition of the tree(s), with respect to general health; disease; maturity; structural integrity; proximity to existing structures; parking; high pedestrian traffic areas; activity areas or interference with utility services, cannot be controlled or remedied through reasonable preservation procedures and practices.

(C) Good forestry practice suggests a reduction in the number of trees due to incapacity of the property to sustain the present number in healthy condition.

(4) The visual prominence and function of each tree on the site shall be considered prior to a decision on the application.

(5) If the application is approved, such conditions shall be imposed as are deemed necessary to fulfill the standards of this chapter.

(g) Construction shall not be done in a manner that negatively affects the growth or health potential of any tree required to be preserved. To improve the chances of long term survival of any tree required to be preserved on a development site, the tree preservation and protection standards, shall be followed. In such cases, an independent arborist or the city arborist shall be on site to observe and monitor work that impacts the tree(s) and, at completion of such work, submit a certification letter acknowledging compliance. In addition, a bond may be required pursuant to subsection (d).

(h) Appeals of any discretionary action shall follow the applicable procedures set forth in Chapter 40 of this Code.

Davis Municipal Code Section 37.03.050(a) requires approval of a valid tree removal permit prior to cutting down, removing, pruning substantially, encroaching into the protection zone of, or topping or relocating any landmark tree or tree of significance. Furthermore, Article 37.05 contains protection procedures to be implemented during grading, construction, or other site-related work. Such procedures, include, but are not limited to, inclusion of tree protection measures on approved development plans and specifications, and inclusion of tree care practices, such as the cutting of roots, pruning, etc., in approved tree modification permits, tree preservation plans, or project conditions.

4.4.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to biological resources. In addition, a discussion of the project's impacts, as well as mitigation measures, where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in the following:

- 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;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- 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;
- 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 native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

Method of Analysis

The information contained in the analysis is primarily based on the BRA prepared by HELIX, which is discussed further below.

Biological Resources Assessment

The analyses within the BRA are based on a literature review, published material, and field surveys of the Study Area, which are detailed further below.

Literature Review

A list of special-status plant and wildlife species with potential to occur within the Study Area was developed as part of the BRA through queries of the following databases:

a) CNDDB query of the "Dixon, Merritt, Davis, Sacramento West, Woodland, Grays Bend, Taylor Monument, Clarksburg, and Saxon" U.S. Geological Survey topographic 7.5-minute series quadrangles (included as Appendix B of the BRA);
b) USFWS Information for Planning and Conservation (IPaC) query of the Study Area (included as Appendix B of the BRA);
c) CNPS Inventory of Rare and Endangered Plants for the "Dixon, Merritt, Davis, Sacramento West, Woodland, Grays Bend, Taylor Monument, Clarksburg, and Saxon" U.S. Geological Survey topographic 7.5-minute series quadrangles (included as Appendix B of the BRA);
d) Natural Resource Conservation Service (NRCS) Web Soil Survey query of the Study Area; and
e) Appendix A of the Yolo HCP/NCCP including modeled habitat maps.

In addition, any special-status plant and wildlife species that are known to occur in the project region, but that were not identified through any of the above database searches, were also analyzed for their potential to occur within the Study Area.

Field Surveys

HELIX conducted biological field surveys of the Study Area on October 4, 2023 and April 16, 2024, to map Yolo HCP/NCCP land covers, assess the suitability of habitats on-site to support special-status species, and conduct protocol-level surveys listed below. HELIX conducted a field survey of the off-site areas on January 28, 2025. Field surveys were performed on foot across the entirety of the Study Area with special attention given to portions of the Study Area with the

potential to support special-status species and sensitive habitats. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed were recorded, and all biological communities occurring on-site were characterized. All resources of interest were mapped with Global Positioning System (GPS)-capable tablets equipped with GPS receivers running ESRI Field Maps for ArcGIS with sub-meter accuracy. A list of all species observed during field surveys is included as Appendix D of the BRA (see Appendix H of this EIR).

The following biological surveys have been conducted within the Study Area:

- Arborist Survey: An arborist survey was conducted under the supervision of a Certified Arborist, pursuant to the City's Tree Ordinance, within Study Area and associated off-site areas on February 3, 10, and 12, 2025. The following data were collected for all trees within the surveyed area: species; trunk diameter at four feet, six inches above the ground; dripline radius; estimated height; and overall health and structure of the tree. Overall health and structure were rated on a five-point scale from Poor to Excellent, with ratings at Poor, Fair-Poor, Fair, Excellent-Fair, and Excellent. The tree data presented in Attachment C of the Arborist Survey (see Appendix J of this EIR) includes tree points where trees were inventoried. Subsequent to the arborist survey being prepared, the project engineers, CBG Civil Engineers, prepared an existing tree inventory sheet summarizing the data included in the arborist survey, which has been incorporated into the analysis presented within this EIR;
- Swainson's Hawk Habitat Assessment: This assessment followed the methods outlined in the (2000) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* by the Swainson's Hawk Technical Advisory Committee. A review of aerial imagery, windshield surveys, and the CNDDB for the presence of suitable nesting habitat for Swainson's hawk within 0.5-mile of the Study Area was conducted;
- Western Burrowing Owl: Protocol-level surveys for burrowing owl were conducted in accordance with the 2012 *Staff Report on Burrowing Owl Mitigation* by the California Department of Fish and Game (Wildlife). The surveys were conducted on March 27, 2024, April 19, 2024, May 10, 2024, June 21, 2024, September 23, 2024, October 9, 2024, November 21, 2024, November 27, 2024, and December 20, 2024; and
- An ARD was conducted in accordance with the USACE Wetlands Delineation Manual (1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (2008), and the National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams (Final Version; USACE 2025). Fieldwork was conducted on April 16, 2024, and January 28, 2025, to assess the three required environmental parameters (hydrology, soil, and vegetation).

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to biological resources is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.4-1 Have a substantial adverse effect, either directly or through habitat modifications, on special-status plant species. Based on the analysis below, the impact is *less than significant*.

According to the BRA conducted by HELIX, 22 special-status plant species have the potential to occur on-site or in the vicinity of the Study Area. All the regional special-

status plants identified in the query occur on adobe, alkaline, or serpentine soils, within vernal pools or other aquatic habitats, within natural habitat types that do not occur in the Study Area, or at elevational ranges outside of the Study Area. In addition, the Study Area has been subject to regular disturbance in association with agricultural activities, and herbicide is also known to be used on-site which likely further limits the potential for special-status plants to occur.

Herbicide was observed being applied by tractors during the site assessment for this BRA. Portions of the Study Area not directly associated with agriculture, such as the riverine habitat and urban areas, do not support habitat for special-status plants due to a lack of suitable habitat or soil types, the presence of existing development/disturbance, a dominance of invasive/non-native plant species, and fluctuating water levels.

For species with limited potential to occur in the on-site and off-site areas, site visits were conducted on October 5, 2023, April 16, 2024, and January 28, 2025, during a period when bristly sedge (*Carex comosa*) and San Joaquin spearscale (*Extriplex joaquinana*) would have been identifiable and are presumed to be absent from the on-site and off-site areas. Historic and ongoing alteration of habitat has led to a dominance of non-native and invasive plant species, and the species will likely continue to flourish even if agricultural activities cease on-site. Without documented occurrences of special-status plants on-site or within seed dispersal distance, the likelihood of special-status plants establishing on-site or in the project off-site areas in the future is extremely unlikely.

Based on the above, the proposed project would have a ***less-than-significant*** impact on special-status plants.

Mitigation Measure(s)
None required.

4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The riverine habitat associated with Channel A supports perennial herbs and other floral resources that could provide foraging habitat for Crotch's bumble bee and potential nesting and overwintering sites in mammal burrows. Suitable habitat is also present in off-site areas in perennial grassland and annual grassland habitats with small mammal burrows.

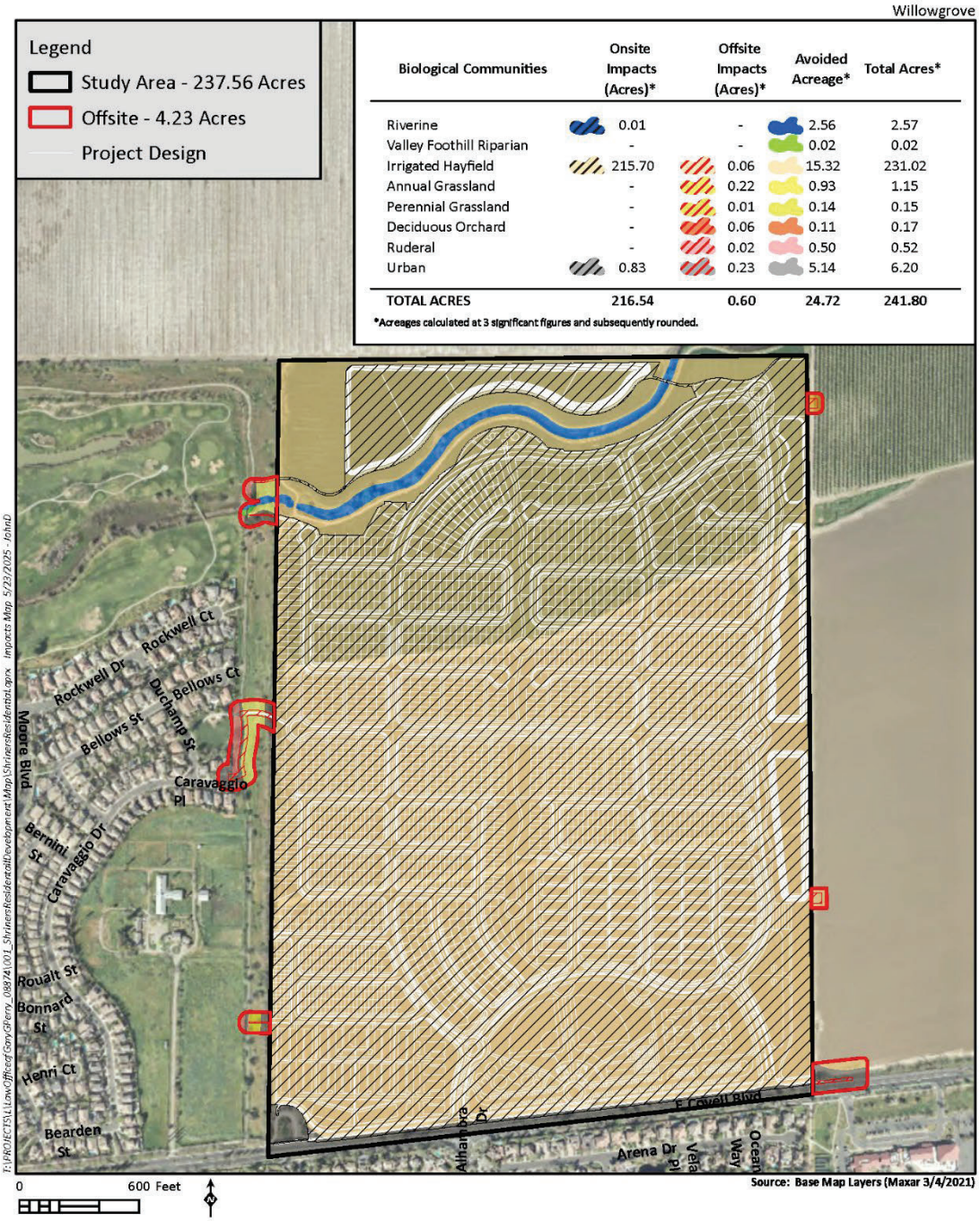
As shown in Table 4.4-4 and Figure 4.4-3, approximately 0.01-acre of Riverine, 0.22-acre of Annual Grassland, and 0.01-acre of Perennial Grassland could be impacted. If Crotch's bumble bee is present at the time of grading, incidental mortality could occur.

Table 4.4-4
Proposed Project Yolo HCP/NCCP Land Cover Impacts

Land Cover Type	Acres			
	On-Site Impact	Off-Site Impact	Avoided	Total
Riverine	0.01	--	2.56	2.57
Valley Foothill Riparian	--	--	0.02	0.02
Irrigated Hayfield	215.70	0.06	15.32	231.02
Annual Grassland	--	0.22	0.93	1.15
Perennial Grassland	--	0.01	0.14	0.15
Deciduous Orchard	--	0.06	0.11	0.17
Ruderal	--	0.02	0.50	0.52
Urban	0.83	0.23	5.14	6.20
Total	**216.54**	**0.60**	**24.72**	**241.80**

Source: HELIX Environmental Planning, 2025.

Figure 4.4-3
Proposed Project Potential Yolo HCP/NCCP Land Cover Impacts



HELIX Environmental Planning

Impacts to Biological Communities
Figure 7

Therefore, without completion of protocol-level preconstruction surveys of areas that would be disturbed to confirm the presence/absence of Crotch's bumble bee, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on special-status wildlife species. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-2 *The provisions contained herein only apply if Crotch's bumble bee remains a candidate species or is listed under CESA at the commencement of construction. Following CDFW's status report on Crotch's bumble bee, if the California Fish and Game Commission finds that the petitioned action is not warranted, the provisions contained herein shall not be required.*

If feasible, initial ground-disturbing activities associated with the proposed project (e.g., grading, vegetation removal, staging) shall take place between September 1 and March 31 (i.e., outside the colony active period) to avoid potential impacts on special-status bumble bees. If completing all initial ground-disturbing activities between September 1 and March 31 is not feasible, then at a maximum of 14 days prior to the commencement of construction activities, a qualified biologist with 10 or more years of experience conducting biological resource surveys within California or previously approved by CDFW, and familiar with Crotch's bumble bee life history, shall conduct a preconstruction survey for special-status bumble bees in the area(s) proposed for impact.

The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and zero rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact, and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch's bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Suitable floral resources for western bumble bee include species in the following families: Asteraceae, Fabaceae, Rhamnaceae, and Rosaceae, as well as plants in the genera Eriogonum and Penstemon.

At a minimum, preconstruction survey methods shall include the following:

- *Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present;*
- *If special-status bumble bees are observed, watch any special-status bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest;*
- *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat;*
- *If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of a minimum of four inches to assist with locating the nest;*
- *Look for concentrated special-status bumble bee activity;*
- *Listen for the humming of a nest colony; and*
- *If bumble bees are observed, attempt to photograph the individual and identify it to species.*

The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could result in take of special-status bumble bees. The report shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department prior to the commencement of construction activities.

If bumble bees are not located during the preconstruction survey or the bumble bees located are definitively identified as a common species (i.e., not special-status species), then further mitigation or coordination with the CDFW is not required.

If any sign(s) of a bumble bee nest is observed, and if the species present cannot be established as a common bumble bee, then construction shall not commence until either (1) the bumble bees present are positively identified as common (i.e., not a special-status species), or (2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include, but not be limited to, waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.

If special-status bees are located, and after coordination with CDFW take of special-status bumble bees cannot be avoided, the project proponent shall obtain an ITP from CDFW, and the project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include, but not be limited to, the project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

4.4-3 Have a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Narrow-leaf milkweed (*Asclepias fascicularis*), a larval host plant, is abundant along portions of the riverine habitat in the Study Area and could provide larval habitat for the Monarch butterfly during summer migration. Monarch butterflies could pass through the Study Area during summer migration and use narrow-leaf milkweed plants along the riverine corridor as larval habitat. The majority of the riverine habitat is proposed for avoidance, but one clear span bridge crossing is proposed along the drainage, which could impact larval habitat for the species. If monarch butterfly eggs, larva, or chrysalises are present on any impacted milkweed plants, incidental mortality could occur. The existing culvert crossing and path would remain for pedestrian use, but no work would be done in the bank or bed of Channel A and no new impacts in this area would be anticipated from the baseline conditions.

Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species (monarch butterfly) identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-3 *The provisions contained herein only apply if monarch butterfly remains proposed for listing under FESA at the commencement of construction.*

Any construction activities within 25 feet of milkweed should occur outside of the summer breeding season (from approximately November 1 through March 15 [USFWS 2021]). If construction activities will occur during the breeding season and directly or indirectly impact milkweed during the summer breeding for Monarch butterflies (approximately March 16 through October 31), pre-construction surveys shall be conducted by a qualified biologist within one week before the onset of

construction. If no Monarch butterfly life stage is identified in or immediately adjacent to the Study Area (within 25 feet), no further surveys or actions would be required.

A report summarizing the results of the survey shall be submitted for review and approval to the City of Davis Community Development Department and Public Works Utilities and Operations Department.

If eggs, caterpillars, or pupae are found, the plants shall be avoided with a 25-foot buffer until metamorphosis is completed and adult butterflies emerge and leave the host plant. Orange construction fencing, flagging, or a similar visible barrier must be used if construction is occurring on-site to demarcate the avoidance area. A biologist shall conduct periodic inspections of the occupied Monarch habitat to determine its life-stage. Monarch butterflies typically take around 30 days to complete their lifecycle from egg to newly hatched adult.

4.4-4 Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Suitable habitat is marginal for northwestern pond turtle the Study Area and is limited to the riverine habitat. Agricultural ditches within the Study Area appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water; the features also lack essential habitat components for the species. The riverine habitat contains sufficient emergent vegetation and basking areas but does not appear to regularly hold water of sufficient depth during the active season of the species and in most years appears to be completely dry. Northwestern pond turtle could occasionally occur in the riverine habitat when sufficiently inundated or in the surrounding uplands but would generally be expected to occur off-site in more suitable habitat. The majority of the riverine habitat is proposed for avoidance, but one clear span bridge crossing is proposed along the drainage, which could impact potentially suitable habitat for the species.

If northwestern pond turtles are present in Channel A and/or upland areas adjacent to Channel A, incidental mortality of individual turtles or eggs could occur during construction that occurs adjacent to the drainage.

Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species (northwestern pond turtle) identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Northwestern pond turtle is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following species-specific Yolo HCP/NCCP Avoidance and Minimization Measure (AMM) to address potential impacts to the species.

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-4 *Yolo HCP/NCCP AMM14: There are no specific design requirements for western pond turtle habitat, however, project proponents must follow design requirements for the valley foothill riparian and lacustrine and riverine natural communities described in AMMs 9 and 10, which require a 100-foot (minimum) permanent buffer zone from the canopy drip-line (the farthest edge on the ground where water will drip from the tree canopy, based on the outer boundary of the tree canopy). If modeled upland habitat will be impacted, a qualified biologist must be present and will assess the likelihood of western pond turtle nests occurring in the disturbance area (based on sun exposure, soil conditions, and other species habitat requirements). If a qualified biologist determines that there is a moderate to high likelihood of western pond turtle nests within the disturbance area, the qualified biologist will monitor all initial ground disturbing activity for nests that may be unearthed during the disturbance, and will move out of harm's way any turtles or hatchlings found.*

4.4-5 Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The giant garter snake is listed as threatened under the FESA and CESA and is also a Covered Species under the Yolo HCP/NCCP. The species is known to occur in agricultural settings, but the ditches and drainage within the Study Area lack vital habitat components for the species. The agricultural ditches appear to be regularly altered in association with crop rotation and water regime, and do not consistently hold water. The riverine habitat contains sufficient emergent vegetation but does not appear to regularly hold water and, in most years, appears to be completely dry during the species active season. Giant garter snake requires water during its active season and is generally found in areas with permanent or semi-permanent water. The species could occasionally occur in the riverine habitat when sufficiently inundated but would generally be expected to occur off-site in more suitable habitat. The majority of the riverine habitat is proposed for avoidance, but one clear span bridge crossing and two storm drain outfalls are proposed along the drainage, which could impact potentially suitable habitat for the species.

Because the giant garter snake is a Yolo HCP/NCCP Covered Species, the proposed project would be required to comply with the applicable Yolo HCP/NCCP AMMs. Applicable Yolo HCP/NCCP AMMs would include species-specific Yolo HCP/NCCP AMM15, which necessitates avoidance of potential habitat and minimization procedures if avoidance is infeasible, including, but not limited to, dewatering irrigation ditches, canals, or other aquatic habitat, providing environmental awareness training, and stopping construction if the species is encountered. However, as the final application to the Yolo Habitat Conservancy has not yet been prepared, proper compliance with the aforementioned Yolo HCP/NCCP AMMs cannot be ensured at

this time, and the proposed project could have a substantial adverse effect on giant garter snake, either directly or through habitat modifications.

Based on the above, without compliance with the Yolo HCP/NCCP, the proposed project could result in a ***significant*** impact related to the project having a substantial adverse effect, either directly or through habitat modifications, on giant garter snake.

Mitigation Measure(s)

Giant garter snake is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following general and species-specific Yolo HCP/NCCP AMMs to address potential impacts to the species. Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

4.4-5 *Yolo HCP/NCCP AMM15: The project proponent will avoid effects on areas where planning-level surveys indicate the presence of suitable habitat for giant garter snake. To avoid effects on giant garter snake aquatic habitat, the project proponent will conduct no in-water/in-channel activity and maintain a permanent 200-foot non-disturbance buffer from the outer edge of potentially occupied aquatic habitat. If the project proponent cannot avoid effects of construction activities, the project proponent will implement the measures below to minimize effects of construction projects (measures for maintenance activities are described after the following bulleted list).*

- *Conduct preconstruction clearance surveys using USFWS-approved methods within 24 hours prior to construction activities within identified giant garter snake aquatic and adjacent upland habitat. If construction activities stop for a period of two weeks or more, conduct another preconstruction clearance survey within 24 hours prior to resuming construction activity.*
- *Restrict all construction activity involving disturbance of giant garter snake habitat to the snake's active season, May 1 through October 1. During this period, the potential for direct mortality is reduced because snakes are expected to move and avoid danger.*
- *In areas where construction is to take place, encourage giant garter snakes to leave the site on their own by dewatering all irrigation ditches, canals, or other aquatic habitat (i.e., removing giant garter snake aquatic habitat) between April 15 and September 30. Dewatered habitat must remain dry, with no water puddles remaining, for at least 15 consecutive days prior to excavating or filling of the habitat. If a site cannot be completely dewatered, netting and salvage of giant garter snake prey items may be necessary to discourage use by snakes.*
- *Provide environmental awareness training for construction personnel, as approved by the Conservancy. Training may*

consist of showing a video prepared by a qualified biologist, or an in-person presentation by a qualified biologist. In addition to the video or in-person presentation, training may be supplemented with the distribution of approved brochures and other materials that describe resources protected under the Yolo HCP/NCCP and methods for avoiding effects.

- *A qualified biologist will prepare a giant garter snake relocation plan which must be approved by the Conservancy prior to work in giant garter snake habitat. The qualified biologist will base the relocation plan on criteria provided by CDFW or USFWS, through the Conservancy.*
- *If a live giant garter snake is encountered during construction activities, immediately notify the project's biological monitor and USFWS and CDFW. The monitor will stop construction in the vicinity of the snake, monitor the snake, and allow the snake to leave on its own. The monitor will remain in the area for the remainder of the work day to ensure the snake is not harmed or, if it leaves the site, does not return. If the giant garter snake does not leave on its own, the qualified biologist will relocate the snake consistent with the relocation plan described above.*
- *Employ the following management practices to minimize disturbances to habitat:*

    - *Install temporary fencing to identify and protect adjacent marshes, wetlands, and ditches from encroachment from construction equipment and personnel.*
    - *Maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted practices. No plastic, monofilament, jute, or similar erosion-control matting that could entangle snakes or other wildlife will be permitted.*

Ongoing maintenance covered activities by local water and flood control agencies typically involve removal of vegetation, debris, and sediment from water conveyance canals as well as resloping, rocking, and stabilizing the canals that serve agricultural water users. Maintenance of these conveyance facilities can typically occur only from mid-January through April when conveyance canals and ditches are not in service by the agency, although some drainages are used for storm conveyance during the winter and are wet all year. This timing is during the giant garter snake's inactive period. This is when snakes may be using underground burrows and are most vulnerable to take because they are unable to move out of harm's way. Maintenance activities, therefore, will be limited to the giant garter snake's active season (May 1 to October 1) when

possible. All personnel involved in maintenance activities within giant garter snake habitat will first participate in environmental awareness training for giant garter snake, as described above for construction-related activities. To minimize the take of giant garter snake, the local water or flood control agency will limit maintenance of conveyance structures located within modeled giant garter snake habitat (Appendix A, Covered Species Accounts) to clearing one side along at least 80 percent of the linear distance of canals and ditches during each maintenance year (e.g., the left bank of a canal is maintained in the first year and the right bank in the second year). To avoid collapses when resloping canal and ditch banks composed of heavy clay soils, clearing will be limited to one side of the channel during each maintenance year.

For channel maintenance activities conducted within modeled habitat for giant garter snake, the project proponent will place removed material in existing dredged sites along channels where prior maintenance dredge disposal has occurred. For portions of channels that do not have previously used spoil disposal sites and where surveys have been conducted to confirm that giant garter snakes are not present, removed materials may be placed along channels in areas that are not occupied by giant garter snake and where materials will not re-enter the canal because of stormwater runoff.

Modifications to this AMM may be made with the approval of the Conservancy, USFWS, and CDFW.

4.4-6 Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Potential nesting habitat for tricolored blackbird, a Yolo HCP/NCCP Covered Species, is marginal within the Study Area. The only potentially suitable nesting habitat is located along the riverine corridor, and it does not appear to be flooded during the nesting season, which may be unsuitable for the species. The entire Study Area provides suitable foraging habitat for the species and the majority of foraging habitat would be eliminated with project development. However, it should be noted that the loss of on-site foraging habitat would be offset by the proposed project's participation in the Yolo HCP/NCCP and the payment of land conversion fees.

The majority of the riverine habitat is proposed for avoidance but one clear span bridge crossing is proposed along the drainage, which could impact potentially suitable nesting habitat for the species. Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species (tricolored blackbird) identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Tricolored blackbird is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following species-specific Yolo HCP/NCCP AMM to address potential impacts to the species. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-6 *Yolo HCP/NCCP AMM21: The project proponent will retain a qualified biologist to identify and quantify (in acres) tricolored blackbird nesting and foraging habitat (as defined in Appendix A, Covered Species Accounts) within 1,300 feet of the footprint of the covered activity. If a 1,300-foot buffer from nesting habitat cannot be maintained, the qualified biologist will check records maintained by the Conservancy (which will include CNDDB data, and data from the tricolored blackbird portal) to determine if tricolored blackbird nesting colonies have been active in or within 1,300 feet of the project footprint during the previous five years. If there are no records of nesting tricolored blackbirds on the site, the qualified biologist will conduct visual surveys to determine if an active colony is present, during the period from March 1 to July 30, consistent with protocol described by Kelsey (2008).*

Operations and maintenance activities or other temporary activities that do not remove nesting habitat and occur outside the nesting season (March 1 to July 30) do not need to conduct planning or construction surveys or implement any additional avoidance measures.

If an active tricolored blackbird colony is present or has been present within the last five years within the planning-level survey area, the project proponent will design the project to avoid adverse effects within 1,300 feet of the colony site(s), unless a shorter distance is approved by the Conservancy, USFWS, and CDFW. If a shorter distance is approved, the project proponent will still maintain a 1,300-foot buffer around active nesting colonies during the nesting season but may apply the approved lesser distance outside the nesting season. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

4.4-7 Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The Study Area provides suitable habitat for burrowing owl along the margins of the Study Area where small mammal burrows are present. The interior of the Study Area is agricultural land, which is routinely disturbed and does not provide habitat for the species. Ground squirrel burrows were observed within the Study Area that provide suitable nesting/refuge habitat, and rubble piles, culverts, and other artificial structures that could be suitable for the species are also within the Study Area. Whitewash, feathers, pellets, or other burrowing owl sign were not observed in the Study Area during the initial survey. Following the initial survey, protocol-level surveys were

conducted within the Study Area and a 500-foot buffer to determine the presence or absence of the species. Surveys have been conducted on March 27, 2024, April 19, 2024, May 10, 2024, June 21, 2024, September 23, 2024, October 9, 2024, November 21, 2024, November 27, 2024, and December 20, 2024. Burrowing owls or evidence of occupancy were not observed during the protocol surveys to date. However, on January 28, 2025, one burrowing owl was observed southeast of the Study Area in the adjacent agricultural field at a water pump system.

Given enough time, burrowing owls could colonize the Study Area in the interim between surveys/analysis and commencement of construction activities. If ground disturbance occurs while burrowing owls are occupying the on-site burrows, individuals could be directly impacted by the proposed project. Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a wildlife species (burrowing owl) identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Burrowing owl is a Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following species-specific Yolo HCP/NCCP AMM to address potential impacts to the species. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-7 *The project applicant shall comply with Yolo HCP/NCCP AMM18. However, should the Yolo HCP/NCCP be modified with respect to burrowing owl coverage in the future given the recent change in the species' status, the project applicant shall comply with the Yolo HCP/NCCP provisions pertaining to burrowing owl as they exist at the time of permit issuance.*

Yolo HCP/NCCP AMM18: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify western burrowing owl habitat (as defined in Appendix A, Covered Species Accounts) within or adjacent to (i.e., within 500 feet of) a covered activity. If habitat for the species is present, additional surveys for the species by a qualified biologist are required, consistent with CDFW guidelines (Appendix L).

If burrowing owls are identified during the planning-level survey, the project proponent will minimize activities that will affect occupied habitat as follows. Occupied habitat is considered fully avoided if the project footprint does not impinge on a nondisturbance buffer around the suitable burrow. For occupied burrowing owl nest burrows, this nondisturbance buffer could range from 150 to 1,500 feet (Table 4-2, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls [incorporated as Table 4.4-5 of this chapter]), depending on the time of year and the level of disturbance, based on current guidelines (California Department of Fish

and Game 2012). The Yolo HCP/NCCP generally defines low, medium, and high levels of disturbances of burrowing owls as follows.

- *Low: Typically 71-80 dB, generally characterized by the presence of passenger vehicles, small gas-powered engines (e.g., lawn mowers, small chain saws, portable generators), and high-tension power lines. Includes electric hand tools (except circular saws, impact wrenches and similar). Management and enhancement activities would typically fall under this category. Human activity in the immediate vicinity of burrowing owls would also constitute a low level of disturbance, regardless of the noise levels.*
- *Moderate: Typically 81-90 dB, and would include medium- and large-sized construction equipment, such as backhoes, front end loaders, large pumps and generators, road graders, dozers, dump trucks, drill rigs, and other moderate to large diesel engines. Also includes power saws, large chainsaws, pneumatic drills and impact wrenches, and large gasoline-powered tools. Construction activities would normally fall under this category.*
- *High: Typically 91-100 dB, and is generally characterized by impacting devices, jackhammers, compression ("jake") brakes on large trucks, and trains. This category includes both vibratory and impact pile drivers (smaller steel or wood piles) such as used to install piles and guard rails, and large pneumatic tools such as chipping machines. It may also include large diesel and gasoline engines, especially if in concert with other impacting devices. Felling of large trees (defined as dominant or subdominant trees in mature forests), truck horns, yarding tower whistles, and muffled or underground explosives are also included. Very few covered activities are expected to fall under this category, but some construction activities may result in this level of disturbance.*

Table 4.4-5
Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls

Time of Year	Level of Disturbance (feet) from Occupied Burrows		
	Low	Medium	High
April 1-August 15	600	1,500	1,500
August 16-October 15	600	600	1,500
October 16-March 31	150	300	1,500

Source: Yolo Habitat Conservancy. Yolo County Habitat Conservation Plan/Natural Community Conservation Plan [Table 4-2]. April 2018.

The project proponent may qualify for a reduced buffer size, based on existing vegetation, human development, and land use, if agreed upon

by CDFW and USFWS (California Department of Fish and Game 2012).

If the project does not fully avoid direct and indirect effects on nesting sites (i.e., if the project cannot adhere to the buffers described above), the project proponent will retain a qualified biologist to conduct preconstruction surveys and document the presence or absence of western burrowing owls that could be affected by the covered activity. Prior to any ground disturbance related to covered activities, the qualified biologist will conduct the preconstruction surveys within three days prior to ground disturbance in areas identified in the planning-level surveys as having suitable burrowing owl burrows, consistent with CDFW preconstruction survey guidelines (Appendix L, Take Avoidance Surveys). The qualified biologist will conduct the preconstruction surveys three days prior to ground disturbance. Time lapses between ground disturbing activities will trigger subsequent surveys prior to ground disturbance.

If the biologist finds the site to be occupied by western burrowing owls during the breeding season (February 1 to August 31), the project proponent will avoid all nest sites, based on the buffer distances described above, during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups that forage on or near the site following fledging). Occupancy of burrowing owl habitat during preconstruction surveys is confirmed at a site when at least one burrowing owl or sign (fresh whitewash, fresh pellets, feathers, or nest ornamentation) is observed at or near a burrow entrance. Construction may occur inside of the disturbance buffer during the breeding season if the nest is not disturbed and the project proponent develops an AMM plan that is approved by the Conservancy, CDFW, and USFWS prior to project construction, based on the following criteria:

- *The Conservancy, CDFW, and USFWS approves the AMM plan provided by the project proponent.*
- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.*
- *If the qualified biologist identifies a change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to stop all construction related activities within the non-disturbance buffers described above. The qualified biologist will report this information to the Conservancy, CDFW, and USFWS within 24 hours, and the Conservancy will require that these activities immediately cease within the non-disturbance buffer. Construction cannot resume*

within the buffer until the adults and juveniles from the occupied burrows have moved out of the project site, and the Conservancy, CDFW, and USFWS agree.

- *If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the project proponent may remove the nondisturbance buffer, only with concurrence from CDFW and USFWS. If the burrow cannot be avoided by construction activity, the biologist will excavate and collapse the burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation after receiving approval from the wildlife agencies.*

If evidence of western burrowing owl is detected outside the breeding season (December 1 to January 31), the project proponent will establish a non-disturbance buffer around occupied burrows, consistent with Table 4-2 (incorporated as Table 4.4-5 of this chapter), as determined by a qualified biologist. Construction activities within the disturbance buffer are allowed if the following criteria are met to prevent owls from abandoning important overwintering sites:

- *A qualified biologist monitors the owls for at least three days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).*
- *The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.*
- *If there is any change in owl roosting and foraging behavior as a result of construction activities, these activities will cease within the buffer.*
- *If the owls are gone for at least one week, the project proponent may request approval from the Conservancy, CDFW, and USFWS for a qualified biologist to excavate and collapse usable burrows to prevent owls from reoccupying the site if the burrow cannot be avoided by construction activities. The qualified biologist will install one-way doors for a 48-hour period prior to collapsing any potentially occupied burrows. After all usable burrows are excavated, the buffer will be removed and construction may continue.*

Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active.

A qualified biologist will monitor the site, consistent with the requirements described above, to ensure that buffers are enforced and owls are not disturbed. Passive relocation (i.e., exclusion) of owls has been used in the past in the Plan Area to remove and exclude owls from active burrows during the nonbreeding season (Trulio 1995). Exclusion and burrow closure will not be conducted during the breeding season for any occupied burrow. If the Conservancy determines that

passive relocation is necessary, the project proponent will develop a burrowing owl exclusion plan in consultation with CDFW biologists. The methods will be designed as described in the species monitoring guidelines (California Department of Fish and Game 2012) and consistent with the most up-to-date checklist of passive relocation techniques. This may include the installation of one-way doors in burrow entrances by a qualified biologist during the nonbreeding season. These doors will be in place for 48 hours and monitored twice daily to ensure that the owls have left the burrow, after which time the biologist will collapse the burrow to prevent reoccupation. Burrows will be excavated using hand tools. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure, such as piping, into the burrow to prevent collapsing until the entire burrow can be excavated and it can be determined that no owls are trapped inside the burrow. The Conservancy may allow other methods of passive or active relocation, based on best available science, if approved by the wildlife agencies. Artificial burrows will be constructed prior to exclusion and will be created less than 300 feet from the existing burrows on lands that are protected as part of the reserve system.

4.4-8 Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk or white-tailed kite. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Swainson's hawk was observed in the Study Area during the site visit conducted on October 5, 2023, which is after the nesting season for the species, and was observed nesting adjacent to the Study Area on April 16, 2024. Over 100 documented occurrences of the species occur within a five-mile radius of the Study Area.

The entire Study Area provides suitable foraging habitat for Swainson's hawk and white-tailed kite and suitable nest trees for both species occur along the riverine habitat, along the boundary of the Study Area, and are also present in the surrounding vicinity. Although trees within the riverine habitat are proposed for avoidance, adjacent construction could impact nesting birds (e.g., through disturbance) if conducted during the nesting season.

The presence of suitable nesting habitat for Swainson's hawk was assessed within 0.5-mile of the Study Area, where accessible. Suitable nest trees are present in residential neighborhoods to the west and south of the Study Area, along Channel A and Wildhorse Golf Course to the west of the Study Area, and along agricultural roads to the north of the Study Area. Suitable nest trees are not present to the east of the Study Area. Although most of the trees are located within residential areas or along roadways, Swainson's hawk has been known to nest in trees in residential and suburban areas, as well as along roadways.

With regard to loss of foraging habitat, the land preservation and management objectives of the Yolo HCP/NCCP are intended to mitigate for the loss of Swainson's

hawk and white-tailed kite nesting and foraging habitat within the Plan Area, including the project site. Section 5.7.6.3 of the Yolo HCP/NCCP explains that with full implementation of the HCP/NCCP, 19,286 acres of natural foraging habitat and 22,508 acres of cultivated lands foraging habitat for Swainson's hawk will be conserved in Category 1 and 2 public and easement lands, including public and easement lands and newly protected lands. In addition, Section 5.7.7.2 explains that the Yolo HCP/NCCP will preserve 18,792 acres of foraging habitat for white-tailed kite and will enroll approximately 3,330 acres of pre-permit reserve lands with white-tailed kite foraging habitat into the reserve system. Overall, the loss of foraging habitat is addressed at a regional scale through the Yolo HCP/NCCP, and the Yolo HCP/NCCP will provide a substantial net benefit to the Swainson's hawk and white-tailed kite.

Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on a raptor species (Swainson's hawk and white-tailed kite) identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Swainson's hawk and white-tailed kite are both Yolo HCP/NCCP Covered Species. Thus, the proposed project would be subject to the following species-specific Yolo HCP/NCCP AMM to address potential impacts to the species. Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-8 *Yolo HCP/NCCP AMM16: The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.*

If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or

flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks.

For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.

4.4-9 Have a substantial adverse effect, either directly or through habitat modifications, on northern harrier, other nesting birds, and other raptors protected under the MBTA and CFGC. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

In addition to the special-status bird and raptor species listed above, other bird species protected by the MBTA and CFGC, including northern harrier, have the potential to be present and nest within the project site and off-site areas. If such species are actively nesting within trees, shrubs, or ground cover planned for removal during construction, incidental mortality of individuals could occur. Furthermore, construction activities adjacent to birds nesting in avoided areas could result in nest abandonment.

Based on the above, the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on nesting songbirds and raptor species protected under the MBTA and CFGC. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-9 *If construction activities take place during the typical bird breeding/nesting season (February 15 through August 31), a preconstruction nesting bird survey shall be conducted by a qualified biologist throughout the project site and all accessible areas within a 500-foot radius of proposed construction areas, at most, 14 days prior to the commencement of construction. If a break in construction activity of more than 14 days occurs, then subsequent surveys shall be conducted. A report summarizing the survey(s) shall be provided to the City of Davis Community Development Department and Public Works*

Utilities and Operations Department within 30 days of the completed survey and is valid for one construction season. If nests are not found, further mitigation is not required.

If active raptor nests are found, construction activities shall not take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot non-disturbance buffer shall be established. The non-disturbance buffers may be reduced if a smaller, sufficiently protective buffer is approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, and nest concealment (i.e., whether visual or acoustic barriers occur between the proposed activity and the nest). A qualified biologist may visit the nest, as needed, to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

If the nest buffer is reduced but construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest in a way that would be considered a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior. The revised non-disturbance buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist in consultation with the City.

Construction activities may only resume within the non-disturbance buffer after a follow-up survey by the biologist has been conducted and a report has been prepared indicating that the nest (or nests) are not active any longer, and that new nests have not been identified.

4.4-10 Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

A total of 0.02-acre of valley foothill riparian habitat was mapped in an off-site area west of the project site, which is generally situated along the bank of an intermittent drainage, known as Channel A. Vegetation in the valley foothill riparian habitat generally consisted of polished willow (*Salix laevigata*), without understory vegetation. Valley foothill riparian is in a topographically low area within the Study Area and is situated between ruderal areas and the intermittent drainage, which supports seasonal marsh vegetation. The proposed project would not directly impact the valley foothill riparian habitat, but setbacks from the habitat are required pursuant to the Yolo HCP/NCCP. The project includes a pedestrian connection to the adjacent Wildhorse Agricultural Buffer, the construction of which would occur in close proximity to the valley foothill riparian habitat.

Specifically, the proposed project would be required to comply with Yolo HCP/NCCP AMM9, set forth by Mitigation Measure 4.4-10(a) below, which requires a 100-foot buffer from the Valley Foothill Riparian canopy drip-line, or if avoidance is infeasible, a lesser buffer or encroachment into the Sensitive Natural Community may be allowed if approved by the Yolo Habitat Conservancy and the wildlife agencies, based on the criteria listed in AMM1. According to AMM1, a lesser resource protection buffer than is stipulated may be approved by the agencies if they determine that the community is avoided to an extent that is consistent with the project purpose. For example, if the purpose of the project is to provide a stream crossing or replace a bridge, the project may encroach into the resource protection buffer and the natural community or species habitat to the extent that is necessary to fulfill the project purpose. Ultimately, the Conservancy and wildlife agencies will determine whether a buffer less than 100 feet from the off-site Valley Foothill Riparian land cover would be allowable.

As discussed further under Impact 4.4-10 below, Covered Activities within the Yolo HCP/NCCP permit area are subject to land cover conversion fees established by the Yolo HCP/NCCP. In addition, the riverine habitat falls under the jurisdiction of Section 1600 of the CFGC. Specifically, CFGC Section 1602 requires notification to CDFW before a project commences "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW then reviews the proposed action(s). If CDFW determines that the proposed activity would substantially affect fish and wildlife resources, a LSAA containing measures to protect affected fish and wildlife resources would be required. The LSAA program is not integrated in the Yolo HCP/NCCP and must be applied for separately and apart from the Yolo HCP/NCCP. The LSAA would be comprised of the final mitigation measure(s) and condition(s) mutually agreed upon by CDFW and the project applicant. Additionally, projects that require a LSAA often additionally require a permit from the USACE under Section 404 of the CWA, which is discussed further under Impact 4.4-11. In such instances, the conditions of the Section 404 permit and the LSAA may overlap. The majority of the riverine habitat is proposed for avoidance, but one clear span bridge crossing is proposed along the drainage, which could impact areas within CDFW jurisdiction. The existing culvert crossing and path would remain for pedestrian use, but no work would be done in the bank or bed of Channel A and no new impacts in this area would be anticipated from the baseline conditions.

Based on the above, without compliance with the provisions of CFGC Section 1600, et seq., the proposed project could have a substantial adverse effect on riparian habitat identified in local or regional plans, policies, regulations or by the CDFW or USFWS, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level. With respect to the third bullet under AMM9 concerning lacustrine and riverine, it is acknowledged that agricultural operations concurrently occur within approximately 10 feet of Channel A. The proposed project would increase the non-disturbance setback from Channel A to a minimum of 50 feet, which will be subject to approval by the Yolo Habitat Conservancy.

4.4-10(a) *Yolo HCP/NCCP AMM9: The buffers for each sensitive natural community are as follows:*

- *Alkali prairie and vernal pools: The area necessary to provide the hydrologic conditions needed to support the wetlands within these natural communities (250 feet). Covered activities will avoid vernal pools or alkali seasonal wetlands by 250 feet, or other distance based on site specific topography to avoid indirect hydrologic effects. A buffer of less than 250 feet around vernal pools or alkali seasonal wetlands will be subject to wildlife agency concurrence that effects will be avoided. Considerations that may warrant a buffer of less than 250 feet may include topography (i.e., if the surrounding microwatershed extends less than 250 feet from the pool or wetland), intervening hydrologic barriers such as roads or canals, or other factors indicating that the proposed disturbance area does not contribute to the pool's hydrology. Other considerations may include temporary disturbance during the dry season where measures are implemented to avoid disturbance of the underlying claypan or hardpan, and the area is returned to pre-project conditions prior to the following rainy season.*
- *Valley foothill riparian: One hundred feet from canopy drip-line. If avoidance is infeasible, a lesser buffer or encroachment into the sensitive natural community may be allowed if approved by the Conservancy and the wildlife agencies, based on the criteria listed in AMM1. Transportation or utility crossings may encroach into this sensitive natural community provided effects are minimized and all other applicable AMMs are followed.*
- *Lacustrine and riverine: Outside urban planning units, 100 feet from the top of banks. Within urban planning units, 25 feet from the top of the banks.*
- *Fresh emergent wetland: Fifty feet from the edge of the natural community.*

4.4-10(b) *Prior to the commencement of ground-disturbing activities associated with the off-site pedestrian connections to the Wildhorse Agricultural Buffer, the project proponent shall apply for a Section 1600 Lake or Streambed Alteration Agreement (LSAA) from CDFW. The information provided shall include a description of all the activities associated with the proposed project, not just those closely associated with the drainages and/or riparian vegetation.*

Impacts for each activity shall be broken down by temporary and permanent impacts, as appropriate, and a description of the proposed mitigation for biological resource impacts shall be outlined per activity and then by temporary and permanent. Information regarding project-specific drainage and hydrology changes resulting from project implementation shall be provided, as well as a description of stormwater treatment methods.

Minimization and avoidance measures shall be proposed, as appropriate, and may include preconstruction species surveys and reporting, protective fencing around avoided biological resources, worker environmental awareness training, seeding disturbed areas adjacent to open space areas with native seed, and installation of project-specific stormwater best management practices (BMPs).

Mitigation for impacts to riparian vegetation, if determined necessary by CDFW, may include restoration or enhancement of resources on- or off-site, purchase of off-site habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to CDFW. Mitigation shall result in no net loss of riparian vegetation. Written verification of the Section 1600 LSAA shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.

4.4-11 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. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Based on the BRA, the riverine feature (2.45 acres on-site and 0.12-acre off-site) within the on- and off-site areas, known as Channel A, is likely to be considered a water of the U.S. and State subject to USACE and RWQCB jurisdiction under Sections 404 and 401 of the CWA. According to the BRA, the proposed project would impact approximately 0.01-acre of on-site riverine habitat through installation of a pedestrian bridge over Channel A and two storm water outfalls into the Channel. Such impacts would result in fill as currently designed and likely require environmental permitting and mitigation.

In order to avoid and minimize effects from Covered Activities on wetlands and waters of the U.S., the Yolo HCP/NCCP sets forth AMM10, which requires project proponents to adhere to stormwater management plans established through compliance with the NPDES permit program. In addition, the Proposed Project would be subject to land cover conversion fees established by the Yolo HCP/NCCP to address conversion of land cover acreages.

Finally, the USACE and RWQCB have jurisdiction over modifications to stream channels, river banks, lakes, and other wetland features. The USACE's jurisdiction is established through the provisions of Section 404 of the CWA, and the jurisdictional authority of the RWQCB is established pursuant to Section 401 of the CWA, which typically requires a water quality certification when an individual or nationwide permit is issued by the USACE.

The RWQCB also has jurisdiction over waters of the State under the Porter-Cologne Water Quality Control Act. As such, the proposed project may be required to obtain a

Section 404 permit from the USACE and a Section 401 permit from the RWQCB and be subject to all the conditions set forth by said permits. As part of compliance with the Section 404 permit process, the protocol-level ARD of the Study Area would be subject to the USACE jurisdictional determination process. Additionally, as discussed further under Impact 4.4-10, the project would also be subject to the regulations set forth through CFGC Section 1600, et seq.

Based on the above, without compliance with the Yolo HCP/NCCP or Section 404 and 401 of the CWA, 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. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact related to the proposed project to a *less-than-significant* level. The proposed project would be subject to Yolo HCP/NCCP AMM9, set forth by Mitigation Measure 4.4-10(a), and AMM10, which requires compliance with NPDES permit requirements, set forth by Mitigation Measure 4.4-11(b). Additionally, in order to ensure compliance with the CWA, the proposed project would be subject to Mitigation Measures 4.4-11(c) and (d), which require the project proponent to obtain a Section 404 permit from the USACE and a Section 401 permit from the RWQCB and subjects the proposed project to all conditions set forth in said permits.

4.4-11(a) *Implement Mitigation Measure 4.4-10(a).*

4.4-11(b) *Yolo HCP/NCCP AMM10: Project proponents will comply with stormwater management plans that regulate development as part of compliance with regulations under National Pollutant Discharge Elimination System (NPDES) permit requirements. Covered activities that result in any fill of waters or wetlands will also comply with requirements under Section 404 of the Clean Water Act, State Water Resources Control Board (State Board), Fish and Game Code Section 1602, and Regional Board regulations. Other than requirements for buffers, minimizing project footprint, and species-specific measures for wetland-dependent covered species, this HCP/NCCP does not include specific best management practices for protecting wetlands and waters because they may conflict with measures required by the USACE, State Board, Regional Board, and CDFW.*

4.4-11(c) *Prior to the commencement of construction that could result in impacts to potentially regulated aquatic features, the project proponent shall submit an aquatic resources delineation to the U.S. Army Corps of Engineers (USACE) for verification purposes. If USACE takes jurisdiction over the riverine habitat, then the applicant shall apply for a Section 404 permit and Waters that will be impacted shall be replaced or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE. Written verification of the Section 404 permit*

shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.

4.4-11(d) *Prior to the commencement of construction that could result in impacts to potentially regulated aquatic features, the project proponent shall apply for a Section 401 water quality certification/waste discharge requirement from the Regional Water Quality Control Board (RWQCB), and adhere to the certification conditions. Written verification of the Section 401 permit shall be submitted to the City of Davis Community Development Department and Public Works Utilities and Operations Department.*

4.4-12 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 native wildlife nursery sites. Based on the analysis below, the impact is *less than significant*.

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation also occurs when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance, such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thereby reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The Study Area is located within an agricultural area that is surrounded by agricultural fields, commercial and residential areas, and roadways. Although wildlife may disperse through the Study Area on a local level, the Study Area is not considered a wildlife migration or movement corridor. The Study Area is surrounded by urban development and agricultural lands with busy roadways and generally may provide limited connectivity to adjacent habitat for wildlife in urban areas upstream of the riverine habitat and downstream to Willow Pass Slough and the Sacramento River. The riverine habitat in the on-site and off-site areas was observed to be dry most of the year based on observations during site visits and aerial imagery and is likely not a significant dispersal corridor for wildlife species. Implementation of the project would not permanently affect any wildlife migration corridors and is not expected to restrict the movement of wildlife along the riverine habitat.

Based on the above, 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, or impede the use of native wildlife nursery sites. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.4-13 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands or impacting individual trees. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

A total of 166 trees were recorded, including 141 trees within or overhanging the Study Area (on-site trees), and a total of 25 trees within the off-site areas.

As presented in Table 4.4-6 and Figure 4.4-4, 49 trees within the Study Area would be impacted by the proposed project through removal. In addition, based on the preliminary site plan, two trees in the off-site area on the western border of the site have driplines that overlap with the project plan and may be impacted by grading and construction (trees #286 and 984).

Table 4.4-6
Proposed On-Site Project Tree Impacts

Tree Species	Number of Trees	
	Permanently Impacted	Tree Tag #
Black walnut (*Juglans nigra*)	7	152, 153, 154, 156, 157, 219, 267
Bradford pear (*Pyrus calleryana*)	1	117
Chinese elm (*Ulmus parvifolia*)	3	113, 115, 127
Coast live oak (*Quercus agrifolia*)[1]	1	109
Common hackberry (*Celtis occidentalis*)	1	126
Golden Rain (*Koelrueteria paniculata*)	29	101, 102, 103, 105, 111, 114, 118, 119, 120, 121, 125, 128, 129, 130, 131, 132, 135, 136, 138, 139, 141, 142, 144, 145, 146, 147, 148, 149, 150
Tree of heaven (*Ailanthus altissima*)	5	106, 107, 108, 110, 116
Unknown/unidentifiable trees	2	112, 155
Total	**49**	**--**

Source: CBG Civil Engineers, 2025.

To address potential impacts to the existing trees within the Study Area, the proposed project would be required to comply with the applicable provisions of Davis Municipal Code Chapter 37. As previously discussed, the City's Tree Ordinance protects various types of trees, including street trees, City trees, and trees of significance/private trees.

Figure 4.4-4
Existing Tree Inventory

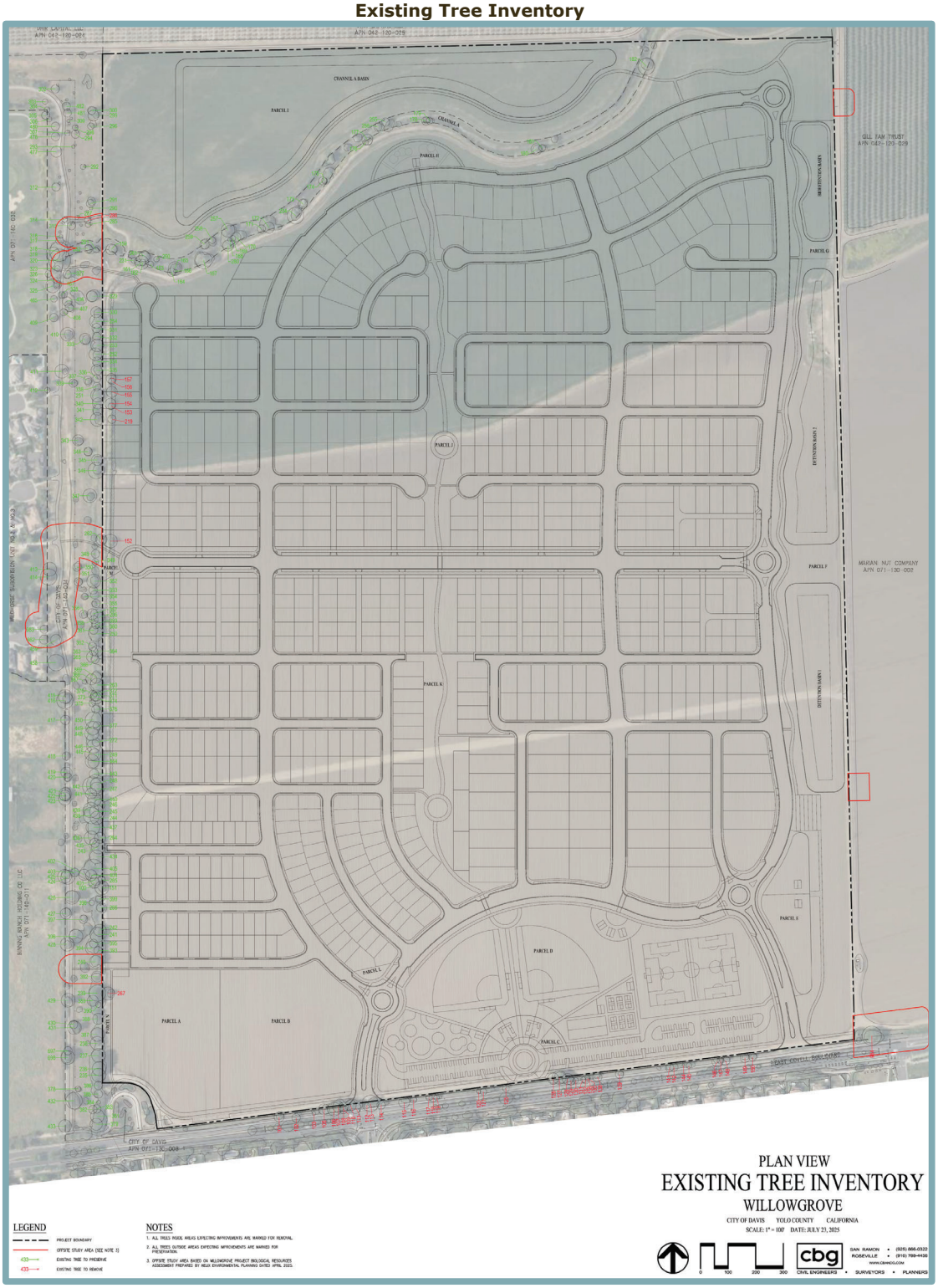


*Figure not OCR compatible.

Compliance with the City's Tree Ordinance would include a combination of preserving the existing healthy trees into the project design, planting of new trees to replace those removed, planting of new trees off-site in City-owned property, and/or payment of in-lieu fees into the City's Preservation Fund. Without compliance, a significant impact would occur.

Based on the above, without compliance with the City of Davis Tree Ordinance, the proposed project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.4-13 *Prior to issuance of grading permits, potential impacts to city trees, street trees, and/or trees of significance, as defined by Davis Municipal Code Chapter 37, shall be mitigated in accordance with the City's Tree Ordinance. Final mitigation requirements shall be determined by the City of Davis and may include the following options:*

- *Incorporation of existing healthy trees into the design of the project;*
- *Replanting of trees on-site;*
- *Replanting of trees off-site in City-owned open space or park; and/or*
- *Payment to the City's Tree Preservation Fund in lieu of replacement.*

4.4-14 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Applicants of development projects within the Yolo HCP/NCCP permit area are required to complete a Yolo HCP/NCCP application package, which includes an application form, a project description, land cover mapping and planning-level surveys, verification of land cover impacts, an AMM plan, and fees or equivalent mitigation. Land cover conversion fees, in effect at time of payment, would be applied for the land cover impacts associated with the proposed project, in accordance with Yolo HCP/NCCP guidelines. Payment of land cover impact fees would support the regional preservation of foraging habitat for special-status species under the Yolo HCP/NCCP.

In addition, pursuant to Yolo HCP/NCCP Chapter 4, the Yolo HCP/NCCP AMMs are intended to ensure that adverse effects on Covered Species and natural communities are avoided and minimized. As previously discussed in this chapter in the species-specific analyses of potential impacts that could occur to Yolo HCP/NCCP Covered

Species, the proposed project would be subject to the applicable Yolo HCP/NCCP AMMs. However, without compliance with the aforementioned provisions of the Yolo HCP/NCCP, the project would result in a significant impact.

Based on the above, without compliance with all applicable AMMs set forth by the Yolo HCP/NCCP, the proposed project could conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

4.4-14(a) *Yolo HCP/NCCP AMM3: Where natural communities and covered species habitat are present, workers will confine land clearing to the minimum area necessary to facilitate construction activities. Workers will restrict movement of heavy equipment to and from the project site to established roadways to minimize natural community and covered species habitat disturbance. The project proponent will clearly identify boundaries of work areas using temporary fencing or equivalent and will identify areas designated as environmentally sensitive. All construction vehicles, other equipment, and personnel will avoid these designated areas.*

4.4-14(b) *Yolo HCP/NCCP AMM4: To prevent injury and mortality of giant garter snake, western pond turtle, and California tiger salamander, workers will cover open trenches and holes associated with implementation of covered activities that affect habitat for these species or design the trenches and holes with escape ramps that can be used during non-working hours. The construction contractor will inspect open trenches and holes prior to filling and contact a qualified biologist to remove or release any trapped wildlife found in the trenches or holes.*

4.4-14(c) *Yolo HCP/NCCP AMM5: Workers will minimize the spread of dust from work sites to natural communities or covered species habitats on adjacent lands.*

4.4-14(d) *Yolo HCP/NCCP AMM6: All construction personnel will participate in a worker environmental training program approved/authorized by the Conservancy and administered by a qualified biologist. The training will provide education regarding sensitive natural communities and covered species and their habitats, the need to avoid adverse effects, state and federal protection, and the legal implications of violating the FESA and NCCPA Permits. A pre-recorded video presentation by a qualified biologist shown to construction personnel may fulfill the training requirement.*

4.4-14(e) *Yolo HCP/NCCP AMM7: Workers will direct all lights for nighttime lighting of project construction sites into the project construction area*

and minimize the lighting of natural habitat areas adjacent to the project construction area.

4.4-14(f) *Yolo HCP/NCCP AMM8: Project proponents should locate construction staging and other temporary work areas for covered activities in areas that will ultimately be a part of the permanent project development footprint. If construction staging and other temporary work areas must be located outside of permanent project footprints, they will be located either in areas that do not support habitat for covered species or are easily restored to prior or improved ecological functions (e.g., grassland and agricultural land). Construction staging and other temporary work areas located outside of project footprints will be sited in areas that avoid adverse effects on the following:*

- *Serpentine, valley oak woodland, alkali prairie, vernal pool complex, valley foothill riparian, and fresh emergent wetland land cover types.*
- *Occupied western burrowing owl burrows. [Occupied for the purpose of AMM8 means at least one burrowing owl has been observed occupying the burrow within the last three years. Occupancy of a burrow may also be indicated by owl sign at the burrow entrance, including molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site].*
- *Nest sites for covered bird species and all raptors, including noncovered raptors, during the breeding season.*

Project proponents will follow specific AMMs for sensitive natural communities (Section 4.3.3, Sensitive Natural Communities) and covered species (Section 4.3.4, Covered Species) in temporary staging and work areas. For establishment of temporary work areas outside of the project footprint, project proponents will conduct surveys to determine if any of the biological resources listed above are present.

Within one year following removal of land cover, project proponents will restore temporary work and staging areas to a condition equal to or greater than the covered species habitat function of the affected habitat. Restoration of vegetation in temporary work and staging areas will use clean, native seed mixes approved by the Conservancy that are free of noxious plant species seeds.

4.4-14(g) *Implement Mitigation Measures 4.4-4, 4.4-5, 4.4-6, 4.4-7, 4.4-8, 4.4-10(a), and 4.4-11(b).*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the

change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The geographic scope for the cumulative biological resources analysis generally includes buildout of the proposed project in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.4-15 Cumulative loss of habitat for special-status species. Based on the analysis below, the proposed project's incremental contribution to the significant cumulative impact is *less than cumulatively considerable*.

The cumulative analysis in this EIR is based upon development of the proposed project, in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. In addition to the proposed project, the Village Farms Davis Project, an approximately 497-acre subdivision project located northwest of the East Covell Boulevard/Pole Line Road intersection, is currently under review by the City. Just west of the project site and north of the East Covell Boulevard/Monarch Lane intersection, is the approved and under construction Palomino Place Project, which is on a 25-acre site and would include single- and multi-family housing, as well as health and training facilities. Other development projects undergoing planning review are located in the southern portion of the City, including two new multi-family residential apartment buildings, a new commercial hotel building, and a 700-unit residential neighborhood located on the 46.9-acre agricultural site formerly known as the Nishi Housing Site. The Bretton Woods University Retirement Community project, located northwest of the West Covell Boulevard/Risling Place intersection, is currently under construction. Finally, the City of Davis previously approved the Davis Innovation and Sustainability Campus (DiSC) 2022 Project, which was proposed for a 102-acre site currently used for agricultural uses (plus the 16.5-acre Mace Triangle property) located immediately to the east of Mace Boulevard and to the north of County Road (CR) 32A, northeast of the City Limits. Buildout of the proposed project, in combination with the foregoing development projects and other development within the City of Davis, would result in a significant cumulative impact related to the loss of special-status species habitat.

As discussed above, the Study Area and off-site areas contain a variety of Yolo County HCP/NCCP land covers, including Irrigated Hayfield, Riverine, Urban, Annual Grassland, Perennial Grassland, Deciduous Orchard, Ruderal, and Valley Foothill Riparian. As discussed throughout this chapter, the above areas represent potential habitat for various special-status species.

This chapter provides a wide range of mitigation to minimize potential adverse effects associated with the proposed project to habitat for special-status species. For example, mitigation measures have been set forth in this chapter to ensure that the proposed project complies with all applicable Yolo HCP/NCCP AMMs, including, but not limited to, AMMs to address potential impacts to Yolo HCP/NCCP Covered Species, such as northwestern pond turtle, giant garter snake, Swainson's hawk, and burrowing owl, as well as AMMs for potential impacts to natural communities and on-

site wetlands. For example, the Yolo HCP/NCCP AMMs require planning-planning surveys for Covered Species, and if detected, implementation of construction-free buffers, and monitoring during construction. Additionally, the proposed project would be required to pay land cover conversion fees and wetland fees to the Yolo Habitat Conservancy.

In addition, while the proposed project would result in the loss of a portion of the existing on-site habitat, the proposed parks, greenbelts, Urban Agricultural Transition Area (UATA), and trail components would include a total of approximately 72.2 acres of green space preserved on-site.

The Yolo HCP/NCCP requires the Yolo Habitat Conservancy to protect approximately 33,300 acres over 50 years, primarily through the acquisition of habitat conservation easements on agricultural land funded with development fees paid by project proponents. The Yolo HCP/NCCP coordinates conservation efforts to ensure that the lands are selected consistent with a conservation strategy based on biological criteria, including the selection of lands that provide habitat to multiple species and are located near existing protected lands and riparian areas. The Yolo Habitat Conservancy regularly consults with the CDFW and the USFWS to ensure that the Yolo HCP/NCCP is successfully and sustainably implemented. As such, the Yolo HCP/NCCP functions as the regional strategy for preserving natural habitat, and compliance with the Yolo HCP/NCCP would prevent cumulative impacts. Projects within the City Limits, including projects associated with buildout of the Davis General Plan planning area, as well as the list of present and probable future projects, would all be required to comply with the Yolo HCP/NCCP. The Yolo HCP/NCCP EIR concluded that cumulative impacts related to biological resources would be less than significant with implementation of the Yolo HCP/NCCP given the regional benefits to biological resources.

Overall, with incorporation of the mitigation measures set forth herein, the proposed project would be required to comply with all applicable Yolo HCP/NCCP AMMs and pay all applicable land cover conversion fees to address Covered Activities within the Study Area. The mitigation measures set forth herein additionally address potential impacts to biological resources that are not covered under the Yolo HCP/NCCP. As such, the proposed project would not result in substantial adverse effects to biological resources protected by CEQA.

Based on the above, cumulative buildout of the City of Davis would result in a significant cumulative impact related to the loss of special-status species habitat, and with incorporation of the mitigation measures set forth herein, the proposed project's incremental contribution to the cumulative significant impact would be *less than cumulatively considerable*.

Mitigation Measure(s)

With incorporation of the mitigation measures set forth herein, the proposed project's contribution to the cumulative significant impact would be *less than cumulatively considerable*.

4.4-15 Implement Mitigation Measures 4.4-10(a), 4.4-10(b), 4.4-11(a), 4.4-11(b), 4.4-11(c), and 4.4-11(d).

4.5. Cultural and Tribal Cultural Resources

4.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

4.5.1 INTRODUCTION

The Cultural and Tribal Cultural Resources chapter of the EIR addresses known historic and precontact-era cultural resources, including tribal cultural resources, in the site vicinity, as well as the potential for previously unknown resources to occur within the project site. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region. Precontact resources are those sites and artifacts of or related to a time period, generally prior to contact with people of European descent. The chapter summarizes the existing setting with respect to cultural and tribal cultural resources, identifies thresholds of significance, evaluates potential impacts to such resources, and sets forth mitigation measures, as necessary. The information presented in this chapter is primarily drawn from the Cultural Resources Assessment prepared for the proposed project by HELIX Environmental Planning, Inc. (HELIX),[1] as well as the City of Davis General Plan[2] and the associated General Plan EIR.[3]

4.5.2 EXISTING ENVIRONMENTAL SETTING

According to the City of Davis General Plan, 12 known precontact-era archaeological resource sites are located in the City's General Plan planning area. Historic archaeological sites have not been recorded in the Davis planning area. However, less than 10 percent of the total planning area has been archaeologically surveyed. In addition, the City of Davis General Plan notes that seven historic sites within the planning area are listed on the National Register of Historic Places (NRHP) and seven are listed on the California Register of Historical Resources (CRHR). The City also has an inventory of 31 historic landmarks, notable entries of which include the Jerome and Mary Chiles Davis Homestead at University of California, Davis (UC Davis), the Davis Junction train station of the California Pacific Railroad, and the Richards Underpass.

The following sections provide further details regarding the prehistoric overview, ethnographic overview, and historic overview of the project area, as well as a description of any identified cultural or tribal cultural resources associated with the project site.

Prehistoric Overview

The concept of history prior to contact with people of European descent refers to the period of time before events were recorded in writing, and varies worldwide. Because a written record does not exist, the current understanding of precontact California relies on archaeological materials and oral histories passed down through generations. Early archaeological research began with Max Uhle, who is credited with the first scientific excavation in California at the Emeryville Shellmound in 1902, and Nels Nelson, who surveyed the San Francisco Bay margins and California coast for archaeological sites from 1906 to 1908.

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1 HELIX Environmental Planning, Inc. *Willowgrove Project Cultural Resources Assessment.* March 2025.
2 City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.
3 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School.* Certified May 2001.

In the 1930s, archaeologists began piecing together a sequence of cultures primarily based on burial patterns and ornamental artifacts from sites in the lower Sacramento Valley. The resulting cultural sequence became known as the Central California Taxonomic System (CCTS), which identified three periods known as the Early, Middle, and Late Horizons, which did not feature specific date ranges. Refinement of the CCTS became a chief concern of archaeologists as the century progressed.

In 1973, David Fredrickson synthesized prior work in combination with his own research to develop a chronology still used today, albeit modified for locality-specific circumstances. Fredrickson's scheme shows that Native Americans have occupied Central California for over 11,000 years and outlines the social, political, and ideological shifts that took place over time. In addition, Fredrickson defined cultural patterns pertinent to the Central Valley, known as the Windmiller, Berkeley, and Augustine patterns.

The Windmiller Pattern, which characterizes the Early Horizon, occurred during the temporal range of 3000 to 1000 B.C. 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 the exploitation of numerous types of terrestrial and aquatic species. Burials occurred in cemeteries and intra-village graves, which were typically ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on the 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 indicates an extensive trade network that may represent the arrival of Utian populations into central California. Rectangular Haliotis, Olivella shell beads, and perforated charmstones are also indicative of the era.

The Berkeley Pattern, which characterizes the Middle Horizon, occurred during the temporal range of 1000 B.C. to A.D. 500. The Middle Horizon displays considerable changes from the Early Horizon, exhibiting a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during the Middle Horizon were characterized by non-stemmed projectile points made primarily of obsidian. The Berkeley Pattern likely marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, a higher proportion of grinding implements occurred during the Middle Horizon, 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. The practice of spreading ground ochre over the burial was also common. Grave goods during the Middle Horizon were generally sparse and typically included 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 the Middle Horizon, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. The Berkeley Pattern reflects the gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

The Augustine Pattern, which characterizes the Late Horizon, occurred during the temporal range of A.D. 500 to the Historic Period. The Late Horizon represents a shift in the general subsistence pattern, including the introduction of bow and arrow technology and, most importantly, acorns becoming the predominant food resource. Trade systems expanded to include raw resources as

well as finished products including an increase in 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; however, the use of ochre and widespread evidence of cremation was reduced. 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. The Augustine Pattern represents the 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. The shift in research methods 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. The oldest archaeological sites in the vicinity of the project area are few in number and consist of evidence of occupations by groups, which made use of lithic tools associated with the Lower Berkeley Pattern of the San Francisco Bay and the Windmiller Pattern of the Delta area, which date to between 3000 and 500 B.C. However, the archaeology of the foothill margins along the east slope of the Central Valley and in Solano County is poorly understood and under-researched. Nonetheless, linguistic data suggests that the ancestors of the cultural groups encountered in the project area by the earliest European explorers, who moved into the area around 700 A.D., are known as the Patwin.

Ethnographic Overview

The project area was once occupied by the Southern Patwin, a cultural group with a language and geographical relation to the Wintun group, who occupied the entire west side of the Sacramento Valley and north of the headwaters of the Sacramento River. Southern Patwin are known to have spoken several dialects, with those who lived within the current project area, and are thought to have spoken “Suisun.” The Southern Patwin, though few in number, exerted influence over an extensive, yet sparsely populated region of the lower Sacramento Valley stretching from the west of the river and from San Pablo and Suisun Bays to the north, perhaps as far as Knights Landing. Detailed information on the Southern Patwin is scarce, as early ethnographers were unable to find large settlements and/or individuals from the Southern Patwin from whom to gather data, and current understanding comes from locals of Spanish descent who had been living in the area, as well as from what is known about Northern Patwin groups and other neighboring cultures.

Patwin settlement patterns consisted of a variety of larger permanent villages and population centers, and smaller temporary camps developed in specific locations to facilitate the exploitation of various resources. Patwin habitation sites were often established along high ground and banks along the Sacramento River or tributary streams, including the Cache, Putah, and Ulatis creeks, and valleys within the coastal range. Major settlements included Aguasto and Suisun, which were established near the bay environments of San Pablo and Suisun. In plains areas, the Patwin only built temporary camps during the summer months due to the absence of firewood and the persistence of nuisance insects, such as gnats during the summer, which were extremely unpleasant. During winter months, camps were built along the margins of the bay marshes and estuaries to facilitate the hunting of water birds. Patwin winter houses were earth-covered, semi-subterranean multi-family structures 20 to 30 feet in diameter, while rectangular brush ramadas were used in summer.

The largest Patwin villages were able to grow to tremendous sizes due to the abundance of resources throughout the Sacramento River and Bay Areas, reaching upwards of 1,000 individuals or more, and subsiding on resources from abundant nearby fisheries, plant foods including seeds, nuts (especially acorns, which served as a dietary staple in the form of soup or gruel), berries, tubers and leafy greens, and wild game including tule elk, antelope, and waterfowl. The seasonal availability of the aforementioned resources would determine the gathering schedule. Plant resources were dried and stored for use during later seasons, and during seasonal salmon runs, communities would gather to fish using tools such as fishing weirs, nets, and tule watercraft.

Politically, the Patwin were divided into tribelets, each with its own chief, who would have lived in the group's major permanent village. Chiefdom was inherited patrilineally, but village elders also held sway over who would take on the role. Leadership responsibilities consisted of overseeing religious ceremonies and overseeing economic prosperity. Larger "dance houses", up to 50 feet in diameter, were the centers of a complex ceremonial system called the "Kuksu Cult", a series of spirit impersonations held from October to May by a powerful secret society. Little is known about the "Kuksu Cult" and the ritual dances, but it is suspected that the ceremonies and ritual dances were perceived by Patwin as essential for the maintenance of proper order of nature and human's role within it. The chief of a village would also make determinations regarding when and where fishing, hunting, and/or gathering efforts would take place. The chief also helped to resolve intra- and extra-tribal conflicts, either through negotiations, or in cases of territorial disputes, outright war with neighboring groups.

In terms of trade, Patwin groups bartered and purchased items with clam shell disk bead currency. Patwin groups are known to have traded for pine nuts, seeds, bear hides, beads, sinew-backed bows, shell beads, magnesite, salt, clams, and obsidian. In exchange, they would offer salmon, river otter pelts, cordage, shell beads, and yellow hammer headbands. Patwin groups were also renowned for their weaved baskets, which would be made in many shapes and sizes to assist with the gathering and storing of resources and in the preparation of foods. Skilled weavers would use sedge roots and willow and redbud shoots in the production of the baskets, which were also imbued with elaborate designs.

The missionization of California proved disastrous for the Patwin, who lived close to the San Francisco Bay. The missions established in the region (Dolores, San Jose, and Sonoma) would all recruit "neophyte" from Patwin villages. As early as 1800, for example, Patwin from the Aguastos village were taken to Mission Dolores. Mariano Vallejo exerted political control of Sonoma and the surrounding area in the 1820s. He worked towards an amicable relationship with local indigenous groups, including the Southern Patwin under Chief Solano, who proved to be a skilled diplomat.

In the late 1840s, however, the Gold Rush changed local dynamics in the area. As a result, the Southern Patwin way of life was tremendously disturbed. Diseases took a heavy toll on local populations, and kidnappings for forced labor on ranchos or violent raids on villages by Euro-American settlers became common. While some Patwin successfully assimilated into surrounding populations and towns, the Southern Patwin village system and their traditional lifeways were all but destroyed by the time early ethnographer Stephen Powers surveyed their former territories in 1871-72.

The Rumsey Indian Rancheria was established in eastern Yolo County in 1907 and hosts the Yocha Dehe Wintun Nation. In 1982, the Bureau of Indian Affairs expanded the rancheria to 260

acres. Members of the Rumsey Indian Reservation established agricultural farms, a grocery store, a gas station, and a bingo casino over the years. The bingo casino was built in 1985 and was renovated and expanded into a destination resort in 2002. The combined revenue from agricultural pursuits, commercial pursuits, and casino revenues currently supports the Yocha Dehe Wintun Nation.

Historic Overview

Control by Spanish colonists was prevalent in the project area during the late 1700s to early 1800s, during which time outposts and ranchos were established to supply missions with cattle, sheep, grains, fruits, and vegetables. In the late 1760s and 1770s, several Spanish expeditions explored coastal areas within present-day Solano and Contra Costa counties, in 1776 Mission San Francisco de Asís and the Presidio were founded, and by 1797, Mission San José de Guadelupe was established near Fremont. In 1821 Commander Luis Argüello and Father Blas Ordaz led a terrestrial excursion across the Ulatis and Putah Creeks, travelling north to present-day Chico. In 1823, San Francisco de Solano, near Sonoma, was established. Similarly, English colonizers began exploring the project area in the early 1800s. Notably, between 1830 and 1833 John Work crossed west over the Sacramento River into present-day Knight's Landing, and the first permanent settlement in the area was established in 1839 in New Helvetia, known in the present-day as the Sacramento Valley area, by Captain John Sutter.

In the early 19th century, Yolo County was further explored by Spanish colonists and pioneers. However, Mexican independence from Spain would end Spanish domination in the greater Bay Area, resulting in the secularization of the missions in 1833, and opening up tracts of land for settlement, cultivation, and animal husbandry. During the Mexican Period, former soldiers and prominent citizens developed and resided on ranchos, which were self-sustaining farms and homesteads supported by the ability to sell off excess livestock and farm products, which were cultivated on the expansive parcels of rancho land. Many indigenous peoples were put to work on the rancheros, some for pay, while others were simply forced to work. With the annexation of California by the United States and the Gold Rush of 1848, squatters on ranchos became a serious problem, with owners having little capacity to enforce or protect their borders from would-be intruders. In addition, some ranchos periodically fell on hard times economically, and owners would find themselves obligated to sell off portions of larger ranches to pay for debts incurred in labor and maintenance costs. Some residents applied for and obtained large grants, known as Mexican Land grants, but the titles were not given until the end of the 1800s, long after California was incorporated into the United States.

In the early 1850s, a man named Jerome C. Davis settled and operated a ranch in lands that would become Davisville, and later, the modern-day City of Davis. Many of the early settlers in the Davis area arrived in the hopes of "striking it rich" in the Gold Rush. However, many immigrants turned to agriculture and ranching for gainful employment. Throughout the 1850s, towns and cities in the area continued to grow and developed into places of commerce. In 1850, Rockville was founded and, by 1852, Suisun City had become a major trading center. Soon after, in 1853, the Town of Cordelia was established as a shipping center for the region and quickly became a regular stop for stagecoaches headed east, north, and west.

The arrival of railroads in the region significantly led to the growth of new towns and the desertion of others, and facilitated the movement of agricultural goods and people to and from the area, including the construction of a railroad through Davisville and the completion of the California Pacific Railroad in 1868. Thereafter, Davisville's streets were laid in line with the railroad, and the

town grew to a population of 400 residents by 1869. Several still famous features in the area were developed in the late 19th century due to the town's commercial success, including the Avenue of Trees, the Dresbach-Hunt-Boyer Home (built in 1875), the Saunders Home (built in 1874), and the Williams-Drummon-Rollins-Keith Home (built in 1876).

The University Farm, a research and science-based instruction extension of the University of California, Berkeley, opened its doors in 1908. The presence of the University Farm quickly led to reforms in local farming techniques, as local agriculturalists became more involved and engaged with the teachings offered at the University. As the years passed, the school grew and shifted focus, ultimately becoming a general campus of the University of California in 1959. With the expansion of its offered curriculum, its faculty increased in size, and its student enrollment expanded considerably. The City of Davis also continued to grow around the expanded campus.

By the 1920s, Davisville had grown to over 1,000 residents, coinciding with the development of City infrastructure. The City improvements included roadway work, water and sewage system developments, and better trash collection methods. In the early 20th century, manufacturing plants were also established in the area, as were produce-processing plants. Subsequently, road improvements became necessary to support the increased number of trucks travelling to and from the area carrying agricultural products and manufacturers. The latter half of the 1940s also saw additional development in the area, including the construction of Monticello Dam to divert Putah Creek for agricultural irrigation. Davis's population boomed after the mid-twentieth century, reaching 3,554 by 1950, 8,910 by 1960, and 23,488 by 1970. In the latter half of the twentieth century, the construction of the Yolo Bypass Causeway allowed Davis residents to commute to Sacramento and increased the local population's mobility in general. Today, Davis continues to be a university-based population and a thriving area for agricultural pursuits.

Historic-period site indicators generally include the following: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains, such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps).

Project Site History and Current Uses

A review of 19th and 20th century maps and aerial photos show the project site as being contained within the "East Davisville" boundary as early as 1900, and within the new boundary of "Davis Joint"/"East Davis" as early as 1926. In aerial photography from 1957, presence of agricultural use on the project site and within the project site vicinity can be observed, as well as the presence of a stream/irrigation ditch across the northern quarter of the site, and the presence of East Covell Boulevard, south of the project site. Aerial photography from 1984 also shows the development of Alhambra Drive extending south from the intersection of East Covell Boulevard. The development of additional access roads can be observed along the western boundary of the site and within the southern third of the project site in aerial photography from 2003 and 2005, respectively.

The approximately 232-acre project site is located north of the intersection of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis, outside of the City of Davis City Limits and the City of Davis Sphere of Influence (SOI). The project site consists of generally flat, agricultural land currently used for agricultural activities. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the

Wildhorse Golf Course to the west. A public trail is also located to the west of the project site within the Wildhorse Agricultural Buffer. Existing trees are located along the project frontage, adjacent to East Covell Boulevard, and along both sides of Channel A. In the northwestern portion of the project site, an existing road crossing allows agricultural operations to continue from Channel A to the northern boundary of the project site. A City-owned public trail easement on the Gill Orchard Easement is located northeast of the project site. An existing grade-separated crossing that allows bicyclists and pedestrians to cross under East Covell Boulevard is located to the southwest of the project site.

According to the Cultural Resources Assessment, the on-site drainage supports wetlands, flows seasonally, passes from the west to the northeast, is a tributary to Willow Pass Slough, and ultimately, the Sacramento River. The site is relatively flat and is tilled in a north-south direction with furrows used for agricultural purposes. Frequently grown crops include, but are not limited to, hay, sunflowers, and tomatoes. Evidence of subterranean irrigation systems is observable at the northern and southern ends of the central and southern portions of the site. Aerial imagery also indicates that ditches are created, moved, and filled as crops are rotated and cultivated. Smaller portions of the site not in cultivation are commonly covered in tall grasses and secondary growth.

The area evaluated within the Cultural Resources Assessment (i.e., the Study Area) encompasses the entire project site, a passive nature area and greenways associated with the proposed agricultural buffer, located to the north and south of the site, and off-site areas which would be disturbed as part of the proposed project. Off-site areas included in the Study Area consist of the existing Wildhorse Agricultural Buffer, west of the site, which would contain off-site connections to existing City of Davis trails in the project site vicinity. Additionally, the Study Area includes an extended section of East Covell Boulevard at the southeast corner of the site where a pedestrian connection to the existing Francis Ellen Watkins Harper Junior High School (Harper Junior High) would be developed (see Figure 4.5-1). The Study Area consists of approximately 256.27 acres situated on flat land associated with agricultural use.

Known Historic and Archaeological Resources

As part of the Cultural Resources Assessment conducted for the proposed project, a review of the archaeological site base maps and records, survey reports, and other materials on file at the Northwest Information Center (NWIC) was completed for the Study Area on April 5, 2024. Further details on the records search are provided in the Method of Analysis section below.

Archival research found that five studies have previously been conducted within a 0.5-mile radius of the site, two of which partially overlap the Study Area: Report S-012219 and Report S-025673, which were conducted in 1990 and 2002, respectively. Based on the findings of the five previously conducted studies, three cultural resources have been documented within 0.5-mile of the site. The identified cultural resources located within 0.5-mile of the Study Area consist of historic-era trash scatter (P-58-000387), a prehistoric era isolated red chert tool fragment (P-57-000427), and a prehistoric era isolated obsidian point (P-57-000428). While the foregoing cultural resources were not identified on the project site, two previously recorded cultural resources, P-57-000427 and P-57-000428, have been documented approximately 885 and 1,558 feet west of the Study Area, respectively.

Figure 4.5-1
Study Area



P-57-000427 and P-57-000428 were originally recorded by Eleanor Derr of Cultural Resources Unlimited in 1990 and consist of a prehistoric era isolated red chert tool fragment and a reworked obsidian projectile point, respectively.

According to HELIX, the two cultural resources were identified during a cultural resources study prepared for the Wildhorse Golf Club and Residential Community Environmental Impact Report. The area studied as part of Report S-012219 narrowly overlaps with the northwestern boundary of the Study Area. An intensive field survey of the Study Area, as shown in Figure 4.5-1, was also completed on May 28, 29, and 30, 2024, as well as on February 5, 2025, as part of the Cultural Resources Assessment, the details of which are provided in the Method of Analysis section below. While the field survey did not identify cultural resources on-site, several modern water pipe installations were identified within the southern half of the central portion of the Study Area, which were determined to be currently in use for agricultural irrigation.

Tribal Cultural Resources

HELIX contacted the Native American Heritage Commission (NAHC) requesting a search of the Sacred Lands File (SLF) for Native American cultural resources within or near the Study Area. The NAHC returned the results of the SLF search on April 23, 2024, and indicated that known Native American cultural resources are not present within the Study Area.

Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18, invitations to consult were sent to tribes who requested notification of proposed projects within the geographic area of the project site on June 5, 2024. Further details on the tribal notification letters are provided in the Methods of Analysis section of this chapter.

4.5.3 REGULATORY CONTEXT

Federal, State, and local governments have developed laws and regulations designed to protect significant cultural and tribal cultural resources that may be affected by actions that they undertake or regulate. The following section contains a summary of basic federal and State laws governing preservation of historic, archaeological, and tribal cultural resources of national, State, and local significance.

Federal Regulations

The following are the federal environmental laws and policies relevant to cultural and tribal cultural resources.

Section 106 for the National Historical Preservation Act of 1966

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in Title 36 of the Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites, which are determined eligible for listing on the NRHP. The criteria for determining NRHP eligibility are found in 36 CFR Part 60. Amendments to the NHPA (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations

only come into play in the private sector if a project requires a federal permit or uses federal funding.

National Register of Historic Places

The NRHP is the nation's master inventory of known historic resources. The NRHP includes listings of resources, including buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. Resources over 50 years of age can be listed on the NRHP. However, properties under 50 years of age that are of exceptional significance or are contributors to a district can also be included on the NRHP. Four criteria are used to determine if a potential resource may be considered significant and eligible for listing on the NRHP. The criteria include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of history; or
B. Are associated with the lives of persons significant in our past; or
C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded or may likely yield information important in prehistory or history.

A resource can be individually eligible for listing on the NRHP under any of the above four criteria, or can be listed as contributing to a group of resources that are listed on the NRHP. A resource can be considered significant in American history, architecture, archaeology, engineering, or culture. Once a resource has been identified as significant and potentially eligible for the NRHP, the resource's historic integrity must be evaluated. Integrity is a function of seven factors: location, design, setting, materials, workmanship, feeling, and association. The factors closely relate to the resource's significance and must be intact for NRHP eligibility.

Historical buildings, structures, and objects are usually eligible under Criteria A, B, and C based on historical research and architectural or engineering characteristics. Archaeological sites are usually eligible under Criterion D, the potential to yield information important in prehistory or history. An archaeological test program may be necessary to determine whether the site has the potential to yield important data. The lead federal agency makes the determination of eligibility based on the results of the test program and seeks concurrence from the State Historic Preservation Officer (SHPO).

Effects to NRHP-eligible resources (historic properties) are adverse if the project may alter, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion on the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

State Regulations

The following are the State environmental laws and policies relevant to cultural and tribal cultural resources.

California Environmental Quality Act and California Register of Historical Places

Applicable State historic preservation regulations to the proposed project include the statutes and guidelines contained in CEQA (Public Resources Code [PRC] Sections 21083.2 and 21084.1 and

Sections 15064.5 and 15126.4[b] of the CEQA Guidelines). CEQA requires lead agencies to consider the potential effects of a project on historic resources and unique archaeological resources. A "historic resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant (PRC Section 5020.1). Under Section 15064.5 of the CEQA Guidelines, a resource is considered "historically significant" if one or more of the following CRHR criteria have been met:

1) The resource is associated with events that have made a significant contribution to the broad patterns of California history;
2) The resource is associated with the lives of important persons from our past;
3) The resource embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
4) The resource has yielded, or may be likely to yield, important information in prehistory or history.

In addition, the resource must retain integrity. Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR.

CEQA requires preparation of an EIR if a proposed project would cause a "substantial adverse change" in the significance of a historical resource. A "substantial adverse change" would occur if a proposed project would result in physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 15064.5[b][1]).

In addition to historically significant resources, which can include archaeological resources that meet the criteria listed above, CEQA also requires consideration of "unique archaeological resources." If a site meets the definition of a unique archaeological resource, the site must be treated in accordance with the provisions of PRC Section 21083.2. Under PRC Section 20183.2(g), an archaeological resource is considered "unique" if it:

1) Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
2) Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
3) Has a special kind or particular quality such as oldest, best example, largest, or last surviving example of its kind;
4) Is at least 100 years old and possesses substantial stratigraphic integrity; or
5) Involves important research questions that can be answered only with archaeological methods.

CEQA also includes specific guidance regarding the accidental discovery of human remains. Specifically, CEQA Guidelines Section 15064.5(e) requires that if human remains are uncovered, excavation activities must be stopped and the county coroner be contacted. If the county coroner determines that the remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC identifies the most likely descendant, and that individual or individuals can make recommendations for treatment of the human remains under the procedures set forth in CEQA Guidelines Section 15064.5.

The SHPO maintains the CRHR. Properties that are listed on the NRHP are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include

properties designated under local ordinances or identified through local historical resource surveys.

Assembly Bill 52

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. "Tribal cultural resources," pursuant to PRC Section 21074(a), are defined as either:

> (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 California Register of Historical Resources.
> (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.

Under AB 52, a project that may cause a substantial adverse change in the significance of a tribal cultural resource is defined as a project that may have a significant effect on the environment. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. AB 52 (PRC Section 21080.3.1) requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe(s) requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe(s). Consultation may include discussing the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe(s).

Senate Bill 18

Signed in September 2004, SB 18 amended Section 815.3 of the Civil Code, amended Sections 65040.2, 65092, 65351, 65352, and 65560 of the PRC, and added to Sections 65352.3, 65352.4, and 65562.5 of the Government Code, relating to traditional tribal cultural places. SB 18 requires local (city and county) governments to consult with California Native American tribes, when amending or adopting a general plan or specific plan, or designating land as open space, in order to aid in the protection of traditional tribal cultural places ("cultural places"). The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code Section 65300 et seq.) and specific plans (defined in Government Code Section 65450 et seq.). Because the proposed project requires City approval of a General Plan Amendment, the proposed project is subject to SB 18 consultation requirements.

Local Regulations

The following are the local environmental laws and policies relevant to cultural and tribal cultural resources.

City of Davis General Plan

The relevant goals, policies, and actions from the adopted City of Davis General Plan related to cultural and tribal cultural resources are presented below.

Historic and Archaeological Resources Chapter

Goal HIS 1 Designate, preserve, and protect the archaeological and historic resources within the Davis community.

Policy HIS 1.2 Incorporate measures to protect and preserve historic and archaeological resources into all planning and development.

Policy HIS 1.3 Assist and encourage property owners and tenants to maintain the integrity and character of historic resources, and to restore and reuse historic resources in a manner compatible with their historic character.

4.5.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to cultural and tribal cultural resources. In addition, a discussion of the impacts associated with the proposed project, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact related to cultural or tribal cultural resources would occur if the proposed project would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Disturb any human remains, including those interred outside of dedicated cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC 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) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k); or
  - (b) 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Method of Analysis

The impact analysis contained in this chapter is primarily based on the Cultural Resources Assessment prepared by HELIX. The Cultural Resources Assessment included archival research, a field survey, and consultation with the NAHC. The methodology of the Cultural Resources Assessment is discussed further below, as well as a discussion of the tribal consultation efforts conducted by the City, pursuant to AB 52 and SB 18.

Archival Research

A cultural resources records search for the Study Area was completed at the NWIC on April 5, 2024. The records search was conducted to determine the extent of previous surveys within 0.5-mile radius of the Study Area, and whether previously documented precontact or historic archaeological sites, architectural resources, or traditional cultural properties exist within the area. As previously discussed, according to records from the NWIC, five studies have previously been conducted within a 0.5-mile radius of the site, two of which partially overlap the current Study Area.

The archival searches of archaeological and historical records, national and State databases, and historic maps included review of the NRHP, California Historical Landmarks, CRHR, and California Points of Historical Interest. Archival research found that two previous cultural resources studies partially overlapped the Study Area, and three studies have been conducted within 0.5-mile of the Study Area (see Table 4.5-1).

Table 4.5-1
Previous Studies Within and Near the Study Area

Previous Studies Overlapping the Study Area		
Author	**Date**	**Report**
Derr, Eleanor	1990	S-012219
Derr, Eleanor	2002	S-025673
Previous Studies within 0.5-Mile of Study Area		
Peak & Associates, Inc.	1994	S-016671
Reutter, Stacie, and David Palmer	2002	S-025654
Massey, Sandra	2004	S-029422

Source: HELIX Environmental Planning, Inc., March 2025.

In addition, as the Office of Historic Preservation (OHP) has determined that structures in excess of 45 years of age could be important historical resources and former building and structure locations could be important archaeological sites, archival research also included an examination of 19th and 20th century maps and aerial photographs to gain insight into the nature and extent of historical development in the general project vicinity and within the Study Area.

Field Survey

An intensive field survey of the Study Area, as shown in Figure 4.5-1, was completed by HELIX on May 28, 29, and 30, 2024, as well as a follow-up survey of the site on February 5, 2025. Surface examination consisted of systematic investigation of the surface by walking in parallel 10-meter transects. During the survey, the ground surface was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, fire-affected rock, prehistoric ceramics), soil discoloration that might indicate the presence of a prehistoric cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations, wells) or historic debris (e.g., metal, glass, ceramics). Ground

disturbances such as gopher holes, burrows, cut banks, and drainage banks were also visually inspected.

Native American Heritage Commission Consultation

HELIX contacted the NAHC to request a search of the SLF to determine whether known tribal cultural resources are located within or near the project site. The NAHC returned the results on April 23, 2024, which were negative, indicating that known tribal cultural resources are not present within the Study Area.

Assembly Bill 52 and Senate Bill 18 Tribal Consultation

In compliance with AB 52 (PRC Section 21080.3.1) and SB 18, project notification letters were distributed by the City on June 5, 2024 to the applicable tribes who had previously requested notification of new development projects within the project area. Specifically, project notification letters were sent to representatives of the Yoche Dehe Wintun Nation, Ione Band of Miwok Indians, and Cortina Band of Indians. A request for consultation was received from the Yocha Dehe Wintun Nation on August 30, 2024. The letter expressed that the tribe has concluded that the proposed project lies within the aboriginal territories of the Yocha Dehe Wintun Nation. As a result, the tribe has a cultural interest in the project and is requesting formal consultation with the project's lead agency. The letter requests that, at the time of consultation, the tribe be provided with a project timeline, detailed project information, and a copy of the latest cultural study for the proposed project. The City provided the latest cultural study to the tribe on May 23, 2025 and will continue to provide any relevant updates or notices. The City received a response letter, dated September 24, 2025, from the Yocha Dehe Wintun Nation acknowledging receipt of the study, noting their cultural interest in the site, and recommending the inclusion of cultural monitors during ground disturbance. Responses were not received from other tribes during the consultation period.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.5-1 Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines, Section 15064.5. Based on the analysis below, the impact is *less than significant*.

Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics. Cultural resources determined eligible for the NRHP by a federal agency are automatically eligible for the CRHR.

As discussed above, known historic resources have not been documented within the project site. In addition, historic sites or artifacts were not identified during the field survey conducted as part of the Cultural Resources Assessment. Furthermore, while the Cultural Resources Assessment identified modern water pipe installations for the

irrigation of on-site crops, HELIX concluded that such resources did not consist of historic-era materials and, thus, impacts to such resources would not be considered significant. Thus, according to the Cultural Resources Assessment, significant impacts related to historical resources under CEQA guidelines Section 15064.5 would not occur as a result of the proposed project.

Based on the above, development of the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.5-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

During the field survey, cultural resources were not identified on-site. However, as previously discussed, two previous cultural resources studies overlap the Study Area. Report S-012219, prepared for the Wildhorse Golf Club and Residential Community Environmental Impact Report, contains the previously recorded prehistoric era isolated red chert tool fragment (P-57-00047) and the previously recorded prehistoric era isolated obsidian point (P-57-00048) located approximately 885 feet and 1,558 feet west of the site, respectively. As discussed further in Chapter 3, Project Description, of this EIR, the project would include off-site improvements consisting of new connections between proposed sidewalks and shared-use paths to existing City of Davis trails located to the north, west, and south of the project site, as well as off-site connections to existing utility lines and a crosswalk immediately southeast of the site. As the previously recorded historical resources are located at least 885 feet outside of the Study Area, it is highly unlikely that construction of the off-site improvements would impact the previously recorded resources. Overall, according to the Cultural Resources Assessment, P-57-00047 and P-57-00048 would not be impacted by the currently proposed project.

The other study overlapping the Study Area, Report S-025673, located just inside the western boundary of the currently proposed project, did not identify any cultural resources. However, HELIX notes that the author of the report recommended on-site archaeological monitoring be conducted during construction activities that result in appreciable ground disturbance (i.e., greater than one-half foot below existing site grade) to identify and preserve any potentially significant artifacts which may be uncovered by excavations, due to the presence of previously recorded cultural resources within 0.5-mile of the report's Study Area.

Though the presence of unknown archaeological resources existing beneath the ground surface is unlikely, in the event that on-site ground-disturbing activities encounter such resources during development of the proposed project, a substantial

adverse effect could occur. Therefore, the proposed project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure is applicable to the proposed project and would reduce the above potential impact to a *less-than-significant* level.

4.5-2 *If archaeological resources are encountered during subsurface excavation activities, the City and Yocha Dehe Wintun Nation (Tribe) shall be notified immediately and all construction activities within a 100-foot radius of the resource shall cease. In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, treatment of all cultural items, including ceremonial items and archaeological items shall reflect the religious beliefs, customs, and practices of the Tribe. All cultural items, including ceremonial items and archaeological items, which may be found at the project site shall be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The project proponent shall waive any and all claims to ownership of tribal ceremonial and cultural items, including archaeological items, which may be found on the project site, in favor of the Tribe. If any intermediary is necessary (for example, an archaeologist retained by the project proponent), said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe.*

If additional significant sites or sites not identified as significant in the project environmental review process, but later determined to be significant, are located within the project impact area, such sites shall be subjected to further archaeological and cultural significance evaluation by the project proponent, the City of Davis, and the Tribe to determine if additional mitigation measures are necessary to treat sites in a culturally appropriate manner, consistent with CEQA requirements for mitigation of impacts to cultural resources. If human remains are present that have been identified as Native American, all ground-disturbing activities shall cease for a period of up to 30 days in accordance with federal Law.

The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of the foregoing requirements. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified cultural resources specialist and Native American Representative from the Tribe. If the resource is determined to be significant under CEQA, the City and Native American Representative from the Tribe shall determine whether preservation in place is feasible.

Such preservation in place is the preferred mitigation. If such preservation is infeasible, the Native American Representative from the Tribe shall prepare and implement a research design and archaeological data recovery plan for the resource. The cultural resources specialists in consultation with the Native American Representative from the Tribe shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (California Historical Resources Information System), and provide for the permanent curation of the recovered materials. The tribe shall be afforded the opportunity to review all documents before submission to the appropriate information center.

4.5-3 Disturb any human remains, including those interred outside of dedicated cemeteries. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As discussed above, known archaeological resources have not been documented within the site. In addition, previous cultural resource studies that have encompassed the project site did not identify human remains within the project site or vicinity. Furthermore, the field survey conducted as part of the Cultural Resources Assessment did not detect unknown archaeological resources or human remains. According to the Cultural Resources Assessment, significant impacts to human remains resulting from disturbance associated with the proposed project are highly unlikely to occur.

Nevertheless, the Study Area is located within 0.5-mile of previously recorded archaeological resources which could be associated with the Native American peoples whose territory encompassed the project site. Thus, the potential for encountering previously unidentified human remains within the site vicinity cannot be entirely ruled out. Given the known precontact occupation of the project vicinity by Native American tribes, the potential for human remains to be discovered during construction cannot be eliminated. Thus, ground-disturbing activities associated with the proposed project could encounter human remains, including those interred outside of formal cemeteries.

Based on the above, the proposed project could disturb human remains, including those interred outside of dedicated cemeteries, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.5-3 *In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, if Native American human remains are found during the course of the proposed project, the determination of Most Likely Descendant ("MLD") under California PRC Section 5097.98 shall be made by the Native American Heritage Commission ("NAHC"), upon notification to the NAHC of the discovery of said remains at the project site. If the*

location of the site and the history and prehistory of the area is culturally-affiliated with the Tribe, the NAHC shall contact the Tribe. A tribal member shall be designated by the Tribe to consult with the landowner and/or project proponents. Should the NAHC determine that a member of an Indian tribe other than Yocha Dehe Wintun Nation is the MLD, and the Tribe is in agreement with this determination, the terms of this protocol relating to the treatment of such Native American human remains shall not be applicable; however, that situation is very unlikely.

In the event that Native American human remains are found during development of the proposed project and the Tribe or a member of the Tribe is determined to be MLD pursuant to the above requirements of the Protocol, the following provisions shall apply. The Medical Examiner shall immediately be notified, ground-disturbing activities in that location shall cease, and the Tribe shall be allowed, pursuant to California PRC Section 5097.98(a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods should be treated and disposed of with appropriate dignity.

The Tribe shall complete its inspection and make its MLD recommendation within 48 hours of getting access to the site. The Tribe shall have the final determination as to the disposition and treatment of human remains and grave goods. Said determination may include avoidance of the human remains, reburial on-site, or reburial on tribal or other lands that will not be disturbed in the future.

The Tribe may wish to rebury said human remains and grave goods or ceremonial and cultural items on or near the site of their discovery, in an area which will not be subject to future disturbances over a prolonged period of time. Reburial of human remains shall be accomplished in compliance with the California PRC Sections 5097.98(a) and (b).

The term "human remains" encompasses more than human bones because the Tribe's traditions call for the burial of associated cultural items with the deceased (funerary objects), and/or the ceremonial burning of Native American human remains, funerary objects, grave goods, and animals. Ashes, soils and other remnants of these burning ceremonies, as well as associated funerary objects and unassociated funerary objects buried with or found near the Native American remains are to be treated in the same manner as bones or bone fragments that remain intact.

4.5-4 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

A search of the SLF conducted by the NAHC for Native American cultural resources within the Study Area returned negative results, indicating known tribal cultural resources are not within the project site or the immediate vicinity. In addition, as previously discussed, the City sent project notification letters on June 5, 2024 to tribes who requested notification within the geographic area of the City pursuant to AB 52 and SB 18. As previously discussed, the City consulted with the Yocha Dehe Wintun Nation, which expressed that the tribe has concluded that the proposed project lies within the aboriginal territories of the Yocha Dehe Wintun Nation and requests that, at the time of consultation, the tribe be provided with a project timeline, detailed project information, and a copy with the latest cultural study for the proposed project. The City provided the latest cultural study to the tribe on May 23, 2025. The City received a response letter, dated September 24, 2025, from the Yocha Dehe Wintun Nation acknowledging receipt of the study, noting their cultural interest in the site, and recommending the inclusion of cultural monitors during ground disturbance. Responses were not received from other tribes during the consultation period.

Based on the findings of the Cultural Resources Assessment, as well as the results of the NAHC SLF search, known tribal cultural resources do not occur within the project site or in its vicinity. While background research and the field surveys did not indicate the presence of known tribal cultural resources, subsurface Native American resources could potentially be identified on the site and the off-site improvement areas during construction activities associated with the proposed project. In the event that tribal cultural resources are discovered during such activities, without inclusion of appropriate measures for unanticipated discoveries of potential, subsurface tribal cultural resources, the proposed project could cause a substantial adverse change in the significance of a tribal cultural resource, as defined in PRC Section 21074. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.5-4(a) *At least 14 calendar days prior to commencement of ground disturbing activities, the applicant shall arrange for a member of the Yocha Dehe Wintun Nation to conduct Cultural Sensitivity Training with the construction crew. If a member of the Yocha Dehe Wintun Nation Tribe is not available to conduct a Cultural Sensitivity Training prior to scheduled ground-disturbing activities, then the applicant shall arrange for a qualified archaeologist to conduct Cultural Sensitivity Training to the construction crew. Generally, the training must consist of a presentation to the construction crew about the types of resources and evidence thereof, role of the Tribe or qualified archaeologist(s), what to do if resources are uncovered, etc. To schedule Cultural Sensitivity Training prior to commencement of construction, the applicant shall contact the Cultural Resources Department Administrative Staff, Yocha Dehe Wintun Nation, Office (530) 796-3400, Email: THPO@yochadehe-nsn.gov. Proof of compliance with this measure shall be provided to the City of Davis Community Development Department.*

4.5-4(b) *A tribal or archaeological monitor shall be present on-site to monitor soil grading, excavation, and trenching activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map, as agreed to by the Tribe.*[4] *At least 14 calendar days prior to commencement of soil grading, excavation, and trenching activities, the applicant shall extend an invitation for a member of Yocha Dehe Wintun Nation Tribe to monitor soil grading, excavation, and trenching activities within the project site. If a member of the Yocha Dehe Wintun Nation Tribe is not available to monitor, then the applicant shall arrange for a qualified archaeologist to monitor soil grading, excavation, and trenching activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. The applicant shall prepare a written monitoring plan that shall identify the anticipated ground-disturbing activities scheduled within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. The applicant may revise or update the notification procedures in the written monitoring plan, the role of the tribal or archaeological monitors, timelines for advanced notification to Yocha Dehe Wintun Nation Tribe prior to commencement of activities requiring monitoring, and the procedures to follow in the event tribal cultural resources are uncovered, as established in the mitigation measures. The written monitoring plan shall be approved by the City of Davis Community Development Department staff in advance of ground-disturbing activities within the areas identified for monitoring in the confidential Willowgrove Monitoring Map. Proof of compliance with this measure shall be provided to the City of Davis Community Development Department.*

4.5-4(c) *If tribal cultural resources are encountered during subsurface excavation activities, the tribal monitor or applicant's qualified archaeologist shall notify the City of Davis, project applicant, and Yocha Dehe Wintun Nation Tribe immediately, and all construction activities within a 100-foot radius of the resource shall cease. The work exclusion buffer may be reduced if the tribal monitor determines the reduced buffer would be adequate to avoid impacts to the resource. In accordance with the Tribe's Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Yocha Dehe Wintun Nation, treatment of all tribal cultural items (including ceremonial items) shall reflect the religious beliefs, customs, and practices of the Yocha Dehe Wintun Nation Tribe as identified by the tribal monitor. All tribal cultural items, including ceremonial items, which may be found at the project site shall be turned over to the Yocha Dehe Wintun Nation Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The project applicant shall waive any and all claims to ownership of tribal ceremonial and tribal cultural items which may be found on the project site, in favor of the Tribe. If any intermediary is necessary (for example, an archaeologist retained by*

[4] The applicant anticipates that such monitoring map would be developed based on recommendations of the Tribe during AB 52 consultations to identify potentially sensitive areas. Given the extensive ground disturbance at the site from long-term agricultural operations, monitoring is not anticipated to be necessary for the entirety of the site.

the project applicant), said entity or individual shall not possess those items for longer than is reasonably necessary, as determined solely by the Tribe.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

4.5-5 Cause a cumulative loss of cultural and tribal cultural resources. Based on the analysis below, the cumulative impact is *less than significant*.

Generally, while some cultural and tribal cultural resources may have regional significance, the resources themselves are site-specific, and impacts to them are project-specific. For example, impacts to a subsurface archaeological find at one project site would not generally be made worse by impacts to a cultural or tribal cultural resource at another site due to development of another project. Rather, the resources and the effects upon them are generally independent. A possible exception to the aforementioned general conditions would be where a cultural or tribal cultural resource represents the last known example of its kind or is part of a larger resources site. For such a resource, cumulative impacts, and the contribution of a project to them, may be considered cumulatively significant.

As described throughout this chapter, the project site does not contain known resources that would be eligible for inclusion on the CRHR or considered significant pursuant to CEQA. However, implementation of Mitigation Measure 4.5-1 would ensure that any impacts to unidentified resources would be reduced to a less-than-significant level. Furthermore, Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through 4.5-4(c) would reduce impacts to previously unknown, subsurface resources and tribal cultural resources that are discovered on-site during construction activities to a less-than-significant level, including human remains.

Similarly, future development projects throughout the project region would be required to implement project-specific mitigation to ensure any potential impacts to identified cultural and tribal cultural resources are reduced to a less-than-significant level, where possible. Therefore, given that cultural and tribal cultural resource impacts are generally site-specific and each future project within the region would be required to mitigate such impacts, any potential impacts associated with cumulative buildout of the City of Davis would not combine to result in a significant cumulative impact.

Based on the above, the potential for impacts related to a cumulative loss of cultural and tribal cultural resources, to which implementation of the proposed project could contribute, is ***less than significant***.

Mitigation Measure(s)

None required.

4.6. Geology and Soils

4.6 GEOLOGY AND SOILS

4.6.1 INTRODUCTION

The Geology and Soils chapter of the EIR describes the geologic and soil characteristics of the project site and evaluates the extent to which implementation of the proposed project could be affected by unstable earth conditions and various geologic and geomorphic hazards. In addition, the chapter evaluates any adverse impacts on paleontological resources. Information from this chapter is primarily drawn from a Geotechnical Engineering Study prepared by Youngdahl Consulting Group, Inc. (Youngdahl) (Appendix K).[1] In addition, information was sourced from the City of Davis General Plan[2] and the associated General Plan EIR.[3]

4.6.2 EXISTING ENVIRONMENTAL SETTING

Background setting information regarding the geology, soils, seismicity, and paleontological resources associated with the project site and the surrounding region is provided below.

Regional Setting and Geology

The City of Davis is located in the eastern portion of the Putah Creek Plain, one of the major features of the southwestern Sacramento Valley. According to the City of Davis General Plan, the land slopes at generally less than one percent, and elevations range from 60 feet above mean sea level (amsl) in the western areas of the City to 25 feet amsl in the eastern areas of the City.[4] The foothills of the Coast Range are approximately 14 miles west of the City, and the Sacramento River is located approximately 11 miles east of the City.

Beneath the Sacramento Valley floor is a layer of metamorphic and igneous rock at depths greater than 17,000 feet. Atop this layer is a layer of marine and sedimentary rocks up to 15,000 feet thick; neither layer contains water. The surface layers consist of up to 3,000 feet of water-bearing alluvial sediments, most of which are semi-consolidated. Only the uppermost layer, which is up to 200 feet deep, consists of unconsolidated alluvial deposits.

According to the City of Davis General Plan, due to a high proportion of silt and clay within the City, the soils in the General Plan planning area are only moderately or slowly permeable, which hinders drainage and ground water recharge. Erosion hazards in the City are “none to slight.” Shrink-swell potential, which is the potential for soil to expand and contract due to moisture and temperature, is predominantly “moderate to high” in the City.

Regional Seismicity

A fault is defined as a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults that is commonly braided and subparallel, but may be branching or divergent. Movement

1 Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study for Shriners Property East Covell Boulevard Davis, California*. November 2024.
2 City of Davis. *City of Davis General Plan.* Adopted May 2001. Amended January 2007.
3 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School.* Certified May 2001.
4 City of Davis. *City of Davis General Plan [pg. 318].* Adopted May 2001. Amended January 2007.

within a fault causes an earthquake. When movement occurs along a fault, the energy generated is released as waves that cause ground shaking. Ground shaking intensity varies with the magnitude of the earthquake, the distance from the epicenter, and the type of rock or sediment the seismic waves move through.

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely the fault would rupture again. The California Geological Survey (CGS) defines an "active fault" as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if evidence of displacement is not present during the Quaternary.

According to the City of Davis General Plan, earthquake faults do not run through the General Plan planning area.[5] The City of Davis General Plan planning area consists of approximately 160 square miles and is located 11 miles west of the City of Sacramento and approximately 79 miles northeast of the City of San Francisco. The project site is located approximately 12.6 miles southeast of the Great Valley Segment 3a (Dunnigan Hills) Fault, approximately 37 miles east of the West Napa Fault, and 68 miles east of the San Andreas Fault. The Dunnigan Hills Fault is an active fault trace that is capable of generating an earthquake moment magnitude of approximately 6.4. The West Napa and San Andreas faults are larger and capable of moment magnitudes of approximately 6.6 to 8.0. Numerous earthquakes along the San Andreas fault system have been felt in Davis. Major earthquakes occurred in 1833, 1868, 1892, 1902, 1906, and most recently in 1989; however, Davis did not suffer significant damage during these events.

The Geotechnical Engineering Study concluded that the project site is not located within any known earthquake fault traces and is not located within an Alquist-Priolo Earthquake Fault Zone. However, the Uniform Building Code (UBC) places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

A low-intensity zone is defined by the U.S. Geological Survey (USGS) as an area that is likely to experience an earthquake measuring a maximum of 5.0 to 5.9 in magnitude on the Richter scale, and a maximum intensity of VII or VIII on the Modified Mercalli scale. The Richter scale measures the amplitude of seismic waves recorded by a seismograph. The Modified Mercalli scale measures the intensity of an earthquake by the way the shaking is felt and responded to by humans, and by the amount of damage the earthquake causes to buildings and structures. The Modified Mercalli scale is shown in Table 4.6-1.

According to the City of Davis General Plan, the Office of Land Use and Climate Innovation (LCI) has placed the Davis area in Seismic Activity Intensity Zone II, which indicates that the maximum intensity of an earthquake would be VII or VIII on the Modified Mercalli Intensity Scale. An earthquake of such magnitude would result in "slight damage in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; and great in poorly built structures."

[5] City of Davis. *City of Davis General Plan [pg. 318].* Adopted May 2001. Amended January 2007.

Table 4.6-1
Modified Mercalli Scale of Earthquake Intensity

Scale	Effects
I.	Earthquake shaking not felt.
II.	Shaking felt by those at rest.
III.	Felt by most people indoors; some can estimate the duration of shaking.
IV.	Felt by most people indoors. Having objects swing, windows and doors rattle, wooden walls and frames creak.
V.	Felt by everyone indoors; many estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle, and glasses clink. Doors close, open, or swing.
VI.	Felt by everyone indoors and most people outdoors. Many now estimate not only the duration of the shaking, but also its direction and have no doubt as to its cause. Sleepers awaken. Liquids disturbed, some spilled. Small unstable objects displaced. Weak plaster and weak materials crack.
VII.	Many are frightened and run outdoors. People walk unsteadily. Pictures thrown off walls, books off shelves. Dishes or glasses broken. Weak chimneys break at roofline. Plaster, loose bricks, unbraced parapets fall. Concrete irrigation ditches damaged.
VIII.	Difficult to stand. Shaking noticed by auto drivers, waves on ponds. Small slides and cave-ins along sand or gravel banks. Stucco and some masonry walls fall. Chimneys, factory stacks, towers, elevated tanks twist or fall.
IX.	General fright. People thrown to the ground. Steering of autos affected. Branches broken from trees. General damage to foundations and frame structures. Reservoirs seriously damaged. Underground pipes broken.
X.	General panic. Conspicuous cracks in ground. Most masonry and frame structures destroyed along their foundations. Some well-built wooden structures and bridges are destroyed. Serious damage to dams, dikes, and embankments. Railroads bent slightly.
XI.	General panic. Large landslides. Water thrown out of banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flatland. General destruction of buildings. Underground pipelines completely out of service. Railroads bent greatly.
XII.	General panic. Damage nearly total, the ultimate catastrophe. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into air.

Source: California Division of Mines and Geology, 1973

Project Site Characteristics

The approximately 232-acre project site is located north of the intersection of East Covell Boulevard and Alhambra Drive in a currently unincorporated portion of Yolo County, California. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately 5 to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

The geologic conditions on the project site are discussed below in further detail, including descriptions of existing site geology, subsurface soil conditions, seismicity and ground shaking, potential for earthquake-induced liquefaction, expansive soils, and groundwater conditions. In addition, this section includes a description of known paleontological resources within the project area.

Project Site Geology

The project site is located within the Great Valley Geomorphic Province of California, more commonly referred to as the Central Valley. The Central Valley is a broad depression bounded by the Sierra Nevada mountain range to the east and the Coast Ranges to the west. The Central Valley has been filled with a thick sequence of sediments derived from weathering of the adjacent mountain ranges resulting in a stratigraphic section of Cretaceous, Tertiary, and Quaternary deposits, which may exceed 16,000 feet in thickness in the Davis Area. The Cretaceous age rocks consist of indurated marine sandstones and shales. The consolidated Tertiary sediments consist of interbedded stream and lake deposits. The Quaternary age sediments consist of poorly consolidated stream and lake deposits composed of alluvial gravels, sands, silts, and clays. The project site is located near the southern end of the Sacramento Valley, approximately 10 miles west of the Sacramento River and approximately 1.5 miles north of Putah Creek. According to the Geotechnical Engineering Study, the site is primarily mapped as Quaternary-age, Holocene alluvial fan deposits with a portion of the northeast area of the site and the vicinity to the north mapped as Holocene basin deposits.

Subsurface Soil Conditions

As part of the Geotechnical Engineering Study, Youngdahl performed subsurface investigation, including the excavation and sampling of 10 test pits and the advancement of 15 exploratory borings, nine infiltration borings, and 16 cone penetration tests (CPTs) throughout the site. The approximate locations of the borings and test pits are presented in Figure 4.6-1. The subsurface soils at the project site were observed to consist of surface soils comprised of low-plasticity clays and sandy clays which were underlain by high-plasticity clays. The tilled depth was approximately 12 inches within the recent test pits. The low-plasticity clays and clayey sands were encountered in medium stiff to stiff/medium dense conditions. The high-plasticity clays were encountered approximately 2.5 to seven feet below the existing ground surface (bgs) in a stiff to very stiff condition and extended to the maximum depth explored of approximately 50 feet bgs. Thin lenses of clayey sands were encountered between approximately 35 to 45 feet bgs and were in a dense condition.

Seismicity and Ground Shaking

Fault rupture hazards are important near active faults and tend to reoccur along the surface traces of previous fault movements. The project site is located approximately 12.6 miles southeast of the Great Valley Segment 3a (Dunnigan Hills) Fault, approximately 37 miles east of the West Napa Fault, and 68 miles east of the San Andreas Fault. The Dunnigan Hills Fault is an active fault trace that is capable of generating an earthquake moment magnitude of approximately 6.4. The West Napa and San Andreas faults are larger and capable of moment magnitudes of approximately 6.6 to 8.0.

Known faults do not extend across the project site, and the project site is not located within an Alquist-Priolo Special Studies Zone. However, the project site is located within an area where shaking from earthquake generated ground motion waves should be considered likely. According to the City of Davis General Plan EIR, groundshaking is not considered a major geologic hazard in the City of Davis.[6]

[6] City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School [pg. 5I-10].* Certified May 2001.

Figure 4.6-1
Borings and Test Pit Locations

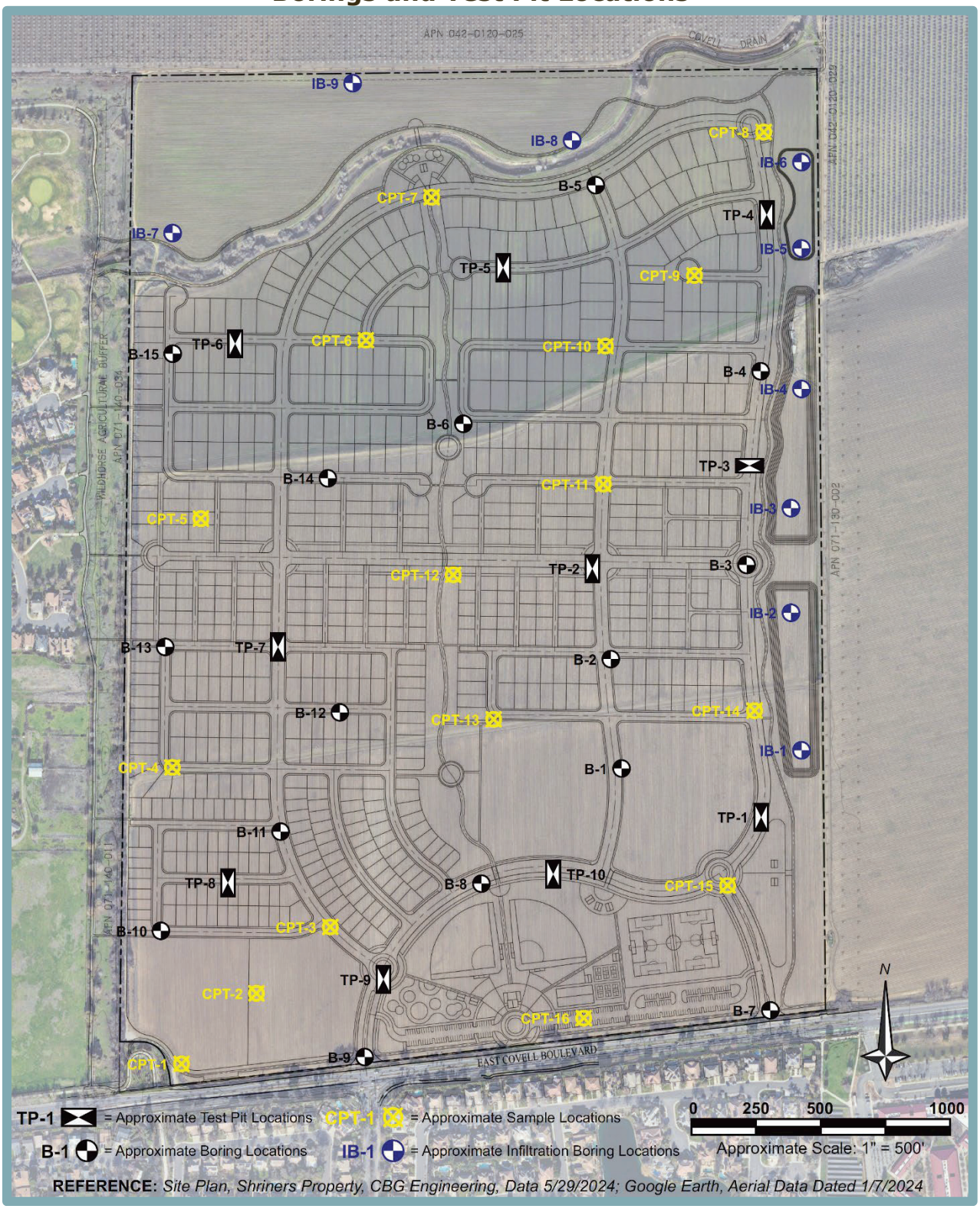


*Figure not OCR compatible.

Liquefaction

Liquefaction occurs when saturated fine-grained sands and/or silts lose physical strength temporarily during earthquake-induced shaking and behave as a liquid due to the loss of point-to-point grain contact and transfer of normal stress to the pore water. Liquefaction potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking. The CGS has designated certain areas within California as potential liquefaction hazard zones, which are areas considered at risk of liquefaction-related ground failure during a seismic event based upon mapped surficial deposits and the depth to the areal groundwater table. The project site is not currently mapped for potential liquefaction hazard by the CGS.[7]

Based upon the CPT findings collected during the exploration of the upper 50 feet of site materials, a liquefaction/seismic settlement of about 0.55 inches was calculated. Although liquefaction could occur at depth, the potential for manifestation of the entire calculated settlement at the ground surface becomes less with increasing depth. Youngdahl also considered other methods of evaluation by using the liquefaction potential index (LPI), which considers depth and thickness of the liquefiable layer with respect to the potential for surface effects of liquefaction. The LPI was calculated to be approximately 1, depending on triggering method, which is considered to have a low potential for liquefaction for the selected method. In addition, Youngdahl considered the liquefaction severity number (LSN), which considers depth to liquefiable layers with respect to potential damage to surface layers due to liquefaction. The LSN was calculated to be approximately 4, depending on triggering method, which is considered to have little to no expression of liquefaction for the selected method. Therefore, Youngdahl concluded that the potential for seismically induced damage due to liquefaction is considered low.

Expansive Soils

Expansive soils are characterized by their ability to undergo significant volume change due to variation in moisture content. Compressible materials consisting of surficial organic material, loose soils, undocumented fills, debris, rubble, rubbish, etc., are considered unsuitable materials for support of proposed structures as such materials can differentially settle. Changes in soil moisture content can result from rainfall, landscape irrigation, utility leakage, roof drainage, perched groundwater, drought, or other factors and may cause unacceptable settlement of structures. According to the Geotechnical Engineering Study, expansive soils were observed in all of the borings and test pits. The clay samples were tested to have medium to high expansion potentials. The findings suggest that the expansion potential is stratified with the near surface materials. Clays with higher expansion were encountered below the surficial moderately expansive clays.

Groundwater

The groundwater table was encountered at the project site at a depth of approximately 40 feet bgs within the boring and CPTs. While impacts to shallow facilities are not expected for such groundwater conditions, the groundwater elevations can change. According to California Department of Water Resources Water Data Library Station Map, a groundwater well located within the southeast corner of the site was measured to have groundwater at approximate depths of 7.5 feet, 14 feet, and 28 feet bgs in 1983, 2006, and 2015, respectively, which could impact deeper facilities (i.e., pipelines, manholes, that encroach this depth or wet wells).

[7] California Department of Conservation. *California Earthquake Hazards Zone Application.* Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed May 2025.

Perched water conditions may also be encountered at the site, typically during the winter and spring seasons. Clays typically have poor drainage conditions and the results of infiltration testing conducted as part of the Geotechnical Engineering Study along the eastern and northern areas of the project site indicated very low infiltration rates. The presence of perched water can vary because of many factors such as the proximity to the poorly-draining clays, topographic elevations, and the presence of utility trenches.

Paleontological Resources

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and leaves are found in geologic deposits (rock formations) where the resources were originally buried.

A search of the paleontological records in the University of California Museum of Paleontology (UCMP) database was conducted on July 1, 2025, by UCMP Senior Museum Scientist, Patricia A. Holroyd, Ph.D., in order to locate potential fossils documented within the project site and the surrounding area.[8] The UCMP database did not identify any known fossil localities at the project site. The two nearest known localities are both Pleistocene in age.

The first locality (D9049) is located approximately 2.5 miles west of the project site, with the location of the locality currently developed with single-family residential uses. Fossil clam shells were found in a fine sandstone lens eight to 10 feet below the surface during construction of a ditch. One of the shells was submitted for Uranium-Thorium series dating and yielded a date of approximately 54,805 years.

The second locality (V69153) has less precise location data, but occurs in section 15, T8N, R1E where Putah Creek cuts into Quaternary sediments. Fossils of both mammoth (*Mammuthus columbi*) and Harlan's ground sloth (*Glossotherium harlani*) were identified.

4.6.3 REGULATORY CONTEXT

The following section is a brief summary of the regulatory context under which soils, geology, seismic hazards, and paleontological resources are managed at the federal, State, and local levels.

Federal Regulations

The following are the federal environmental laws and policies relevant to soils, geology, seismic hazards, and paleontological resources.

Federal Earthquake Hazards Reduction Act

Passed by Congress in 1977, the Federal Earthquake Hazards Reduction Act is intended to reduce the risks to life and property from future earthquakes. The Act established the National Earthquake Hazards Reduction Program (NEHRP). The goals of NEHRP are to educate and improve the knowledge base for predicting seismic hazards, improve land use practices and building codes, and to reduce earthquake hazards through improved design and construction techniques.

[8] Patricia A. Holroyd, Ph.D., Senior Museum Scientist, University of California Museum of Paleontology. *Personal communication [email] with Nick Pappani, Vice President, Raney Planning and Management*. July 1, 2025.

International Building Code

The UBC was first published in 1927 by the International Council of Building Officials and is intended to promote public safety and provide standardized requirements for safe construction. The UBC was replaced in 2000 by the new International Building Code (IBC), published by the International Code Council (ICC), which is a merger of the International Council of Building Officials' UBC, Building Officials and Code Administrators International's National Building Code, and the Southern Building Code Congress International's Standard Building Code. The intention of the IBC is to provide more consistent standards for safe construction and eliminate any differences between the three preceding codes. All State building standard codes are based on the federal building codes with California amendments.

Federal Clean Water Act

Section 402 of the federal Clean Water Act (CWA) mandates that certain types of construction activities comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs).

As of September 1, 2023, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2022-0057-DWQ. The General Permit requires all dischargers, where construction activity disturbs one or more acres, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and stormwater collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect stormwater quality;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.
5. Develop and provide plans, calculations, and other supporting documentation for compliance with existing permitted Phase I or Phase II municipal separate storm sewer post-construction requirements or the post-construction standards of the General Permit.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically and a copy of the SWPPP must be submitted to the City of Davis. When project construction is completed, the landowner must file a Notice of Termination (NOT).

State Regulations

The following are the State environmental laws and policies relevant to soils, geology, seismic hazards, and paleontological resources.

Alquist-Priolo Earthquake Fault Zone Act

The 1972 Alquist-Priolo Earthquake Fault Zone Act was passed to prevent the new development of buildings and structures for human occupancy on the surface of active faults. The Act is directed at the hazards of surface fault rupture and does not address other forms of earthquake hazards. The locations of active faults are established into fault zones by the Alquist-Priolo Zone Act. Local agencies regulate any new developments within the appropriate zones in their jurisdiction.

The Alquist-Priolo Zone Act regulates development near active faults so as to mitigate the hazard of surface fault rupture. The Alquist-Priolo Zone Act requires that the State Geologist (Chief of the California Department of Mines and Geology [CDMG]) delineate "special study zones" along known active faults in California. Cities and counties affected by the special study zones must regulate certain development projects within the special study zones. The Alquist-Priolo Zone Act prohibits the development of structures for human occupancy across the traces of active faults. According to the Alquist-Priolo Zone Act, active faults have experienced surface displacement during the last 11,000 years. Potentially active faults are those that show evidence of surface displacement during the last 1.6 million years. A fault may be presumed to be inactive based on satisfactory geologic evidence; however, the evidence necessary to prove inactivity sometimes is difficult to obtain and may not exist.

Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code [PRC] Section 2690-2699.6) addresses non-surface rupture earthquake hazards, including liquefaction, induced landslides, and subsidence. A mapping program is also established by this Act, which identifies areas within California that have the potential to be affected by such non-surface rupture hazards. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Standards Code

The State of California regulates development within the State through a variety of tools that reduce or mitigate potential hazards from earthquakes or other geologic hazards. The California Building Standards Code (CBSC) (California Code of Regulations [CCR], Title 24) governs the design and construction of all building occupancies and associated facilities and equipment throughout California. In addition, the CBSC governs development in potentially seismically active areas and contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. The California building standards include building standards in the national building code, building standards adapted from national codes to meet California conditions, and building standards adopted to address particular California concerns. It should be noted that the CBSC is updated on a triennial cycle. The most recent update, the 2022 CBSC, became effective on January 1, 2023.

Local Regulations

Relevant goals and policies from the City of Davis General Plan and various other local guidelines and regulations related to soils, geology, seismic hazards, and paleontological resources are provided below.

City of Davis General Plan

The following goal and policy from the City of Davis General Plan is applicable to the proposed project:

Hazards Chapter

Goal HAZ 2 Minimize risks associated with soils, geology and seismicity in Davis.

Policy HAZ 2.1 Take necessary precautions to minimize risks associated with soils, geology and seismicity.

City of Davis Municipal Code

Section 40.42.110 of the City of Davis Municipal Code regulates site grading design. The following guidelines are applicable to the proposed project, and are outlined below.

Section 40.42.110 Grading design plan

(a) For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the landscape documentation package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement.

1) The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:
   A. Height of graded slopes;
   B. Drainage patterns;
   C. Pad elevations;
   D. Finish grade; and
   E. Stormwater retention improvements, if applicable.
2) To prevent excessive erosion and runoff, it is highly recommended that project applicants:
   A. Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;
   B. Avoid disruption of natural drainage patterns and undisturbed soil; and
   C. Avoid soil compaction in landscape areas; and
   D. Decompact and break up compacted soil in landscape areas.
3) The grading design plan shall contain the following statement: “I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan” and shall bear the signature of a licensed professional as authorized by law. (Ord. 2369 § 2, 2010)

4.6.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to geology, soils, and

paleontological resources. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, an impact related to geology and soils is considered significant if the proposed project would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction; and
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- 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 landslides, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 118-1-B of the UBC (1994), creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (see Chapter 5, Effects Not Found to be Significant); or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As noted above, issues related to whether the proposed project would result in any of the following impacts are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Method of Analysis

The analysis presented within this chapter is based primarily on the Geotechnical Engineering Study prepared for the proposed project by Youngdahl. The purpose of the Geotechnical Engineering Study was to evaluate the subsurface soil and geologic conditions within the project site and provide conclusions and recommendations pertaining to the geotechnical and geologic aspects of the proposed project. The report was intended for project planning and due-diligence purposes only. Additional geotechnical investigation and analysis would be required for design and construction of the proposed project. The scope of the Geotechnical Engineering Study included the following:

- Review of United States Geological Survey (USGS) topographic maps, available groundwater data, and geotechnical and geologic data;
- Site reconnaissance;
- Subsurface investigation, including excavation of 10 test pits to a maximum depth of approximately 14.5 feet bgs; the advancement of 15 exploratory borings to a maximum depth of approximately 51.5 feet bgs; nine infiltration borings; and 16 CPTs to a maximum depth of approximately 50 feet bgs;
- Laboratory testing of representative selected soil samples collected to determine various soil engineering properties;

- Geotechnical engineering analysis of the on-site conditions, soil characteristics, and geology and seismicity;
- Development of geotechnical recommendations and considerations regarding earthwork construction; and
- Development of geotechnical design criteria for code-based seismicity, foundations, post-tensioned slabs, retaining walls, and slabs on grade.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.6-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure. Based on the analysis below, the impact is *less than significant*.

Known faults do not extend across the project site, and the project site is not located within an Alquist-Priolo Special Studies Zone.[9] Therefore, the potential for fault rupture, damage from fault displacement, or fault movement directly below the project site is considered low. According to the City's General Plan EIR, the project site is located within an area where shaking from earthquake generated ground motion waves should be considered likely; however, groundshaking is not considered a major geologic hazard in the City of Davis.[10]

While lower-intensity earthquakes could potentially occur at the project site, the design of project structures would be required to adhere to the provisions of the 2022 CBSC, or the CBSC in effect at the time of building permit issuance. The 2022 CBSC contains provisions to safeguard against major structural failures or loss of life caused by earthquakes or other geologic hazards. Specifically, projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage, but with some non-structural damage; and 3) resist major earthquakes without collapse, but with some structural, as well as non-structural damage. Although conformance with the CBSC does not guarantee that substantial structural damage would not occur in the event of a maximum magnitude earthquake, conformance with the CBSC can reasonably be assumed to ensure structures would be survivable, allowing occupants to safely evacuate in the event of a major earthquake.

Furthermore, according to the Geotechnical Engineering Study, the potential for liquefaction and significant adverse impacts from liquefaction are low. Thus, because the project site is not located at or near any active or potentially active faults, the risk of liquefaction and/or ground failure on the site would not be substantial. Nor would the proposed project include any features that would exacerbate any existing risks

[9] Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study for Shriners Property East Covell Boulevard Davis, California*. November 2024.

[10] City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School [pg. 5I-10].* Certified May 2001.

from on-site geological conditions. Impacts related to liquefaction and landslide are discussed further in Impact 4.6-3 of this chapter.

Overall, the proposed development would not be subject to substantial risks related to fault rupture hazards. Due to the relatively low seismicity of the area, and compliance with CBSC requirements related to seismic design, the potential for the project to expose people or structures to the risk of loss, injury, or death involving rupture of an earthquake fault, strong ground shaking, or ground failure would be ***less-than-significant***.

Mitigation Measure(s)
None required.

4.6-2 Result in substantial soil erosion or the loss of topsoil. Based on the analysis below, the impact is *less than significant*.

Erosion refers to the removal of soil from exposed bedrock surfaces by wind or water. Although naturally occurring, erosion is often accelerated by human activities that disturb soil and vegetation. Grading, excavation, removal of vegetation cover, and loading activities associated with construction could temporarily increase erosion, runoff, and sedimentation. Buildout of the proposed project would require grading, excavation, and other construction-related activities, which, during the early stages of construction, could cause topsoil to be exposed, potentially resulting in wind erosion or an accelerated rate of erosion during storm events. However, the topography of the project site is relatively level, and upon development of the project site with buildings and structures, the amount of exposed soil that may be lost due to wind or stormwater runoff would be minimized, as the project site would be largely covered with impervious surfaces.

NPDES permits are required for the discharge of pollutants to waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, dry stream beds, wetlands, and storm sewers. The RWQCB issues permits in lieu of direct issuance by the Environmental Protection Agency (EPA). The terms of the NPDES permits implement pertinent provisions of the Federal CWA. Section 30.03.010 of City of Davis Municipal Code adopts by reference the standards of the State of California's NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity (NPDES General Permit No. CAS000002). In accordance with the NPDES General Construction Permit, a SWPPP is required for any project that disturbs at least one acre of soil. Because the proposed project would disturb more than one acre of soil, a SWPPP in compliance with the NPDES would need to be prepared.

Pursuant to NPDES requirements, a SWPPP would be prepared for the proposed project, which would include the site plan, drainage patterns and stormwater collection and discharge points, BMPs, and a monitoring and reporting framework for implementation of BMPs, as necessary. In addition, a Notice of Intent (NOI) would be filed with the RWQCB. Construction activities would be required to comply with the conditions of this permit, including the implementation of multiple erosion and sediment control BMPs identified in the SWPPP. A Qualified SWPPP Practitioner

(QSP) would ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The QSP for the project would amend the SWPPP and revise project BMPs, as determined necessary through field inspections, to protect against substantial erosion or siltation on- or off-site. Compliance with a project-specific SWPPP would help ensure that soil erosion during construction and rain events is limited to the maximum extent feasible.

A drainage course with associated riparian habitat (Channel A) runs east to west through the site within the proposed Urban Agricultural Transition Area (UATA). While the proposed project would include a new pedestrian and vehicle bridge over Channel A, erosion control measures would be implemented around Channel A during construction activities, and all other measures outlined in the SWPPP and other general construction permits would be required. The existing culvert crossing located in the northwestern portion of the project site would remain for pedestrian use, but work is not anticipated in the bank or bed of Channel A. Therefore, the potential for erosion and associated hazards would be low.

During project operations, vehicles would be limited to paved areas of the project site, and all surfaces would be either paved or landscaped; thus, the potential for erosion to occur during project operations is also limited. Implementation of the SWPPP and BMPs would ensure that the proposed project would not result in substantial erosion or the loss of topsoil.

Therefore, the proposed project would not result in substantial soil erosion or the loss of topsoil, and thus, a ***less-than-significant*** impact could occur.

Mitigation Measure(s)

None required.

4.6-3 Be located on a geological 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, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial risks to life or property. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Issues associated with unstable geologic units and/or soils, including landslide, lateral spreading, subsidence, liquefaction, collapse, and expansive soils are discussed below.

Landslides

A landslide is defined as the movement of a mass of rock, debris, or earth down a slope. Almost every landslide has multiple causes. Slope movement occurs when forces acting down-slope exceed the strength of the earth materials that compose the slope. Landslides in California occur mainly due to intense rainfall or are triggered by earthquakes. According to the CGS, the project site is not currently within a State of

California Seismic Hazard Zone for seismically induced landsliding.[11] Topography at the project site is relatively flat within the southern half of the site, then gently slopes down to the north from an access road into a relatively flat field to Channel A. The existing slopes within Channel A were observed to be steeper than 2H:1V (Horizontal:Vertical) with erosion along the edges. The field north of the canal is relatively flat. The remaining slopes at the project site were observed to have adequate vegetation on the slope face, appropriate drainage away from the slope face, and apparent tension cracks or slump blocks in the slope face or at the head of the slope were not observed. Other indications of slope instability such as seeps or springs were not observed. Given that the project site is not mapped in a landslide zone and the project site does not contain any slopes that could be subject to landslide risks, development of the proposed project with residential uses and associated improvements would not result in on- or off-site landslide hazards.

Lateral Spreading

Lateral spreading is associated with terrain near free faces such as excavations, channels, or open bodies of water. As discussed above, the project site is relatively level. The proposed development area and the surrounding area do not contain any steep slopes or free faces. With respect to the slope associated with Channel A, the proposed development would be setback from Channel A due to the UATA in the northern portion of the project site. Therefore, the proposed project would not be subject to substantial risks related to lateral spreading.

Subsidence/Settlement

Subsidence is the settlement of soils of very low density, generally from either oxidation of organic material, desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years, and is a common consequence of liquefaction. Due to the site's low potential for liquefaction, the potential for seismically-induced settlement to occur at the site is also considered to be low.

Liquefaction

Liquefaction occurs when saturated fine-grained sand and/or silts lose their physical strength temporarily during earthquake-induced shaking and behave as a liquid. The CGS has designated certain areas within California as potential liquefaction hazard zones; however, the site is not currently mapped for potential liquefaction hazard by the CGS. Additionally, the Geotechnical Engineering Report indicates that a low probability of liquefaction exists at the site. Therefore, the proposed structures and associated improvements would not be subject to substantial risks associated with liquefaction.

Collapse

As discussed above, the project site is not located in an area that would likely be subject to strong ground shaking, and is not underlain by any active faults or located within an Alquist-Priolo Fault Study Zone. Additionally, all structures constructed as part of the proposed project would be required to adhere to the provisions of the most recent version of the CBSC in effect at the time of building permit issuance. Structures

[11] California Geological Survey. *Landslide Inventory Map.* Available at: https://maps.conservation.ca.gov/cgs/lsi/app/. Accessed May 2025.

built according to the seismic design provisions of current building codes would be able to resist major earthquakes without collapse, but with some structural, as well as non-structural damage. Given the project's adherence to the CBSC requirements, the proposed project would not be subject to substantial risks associated with building collapse.

Expansive Soils

According to the Geotechnical Engineering Study, expansive soils were observed in all of the borings and test pits conducted as part of the subsurface investigation. The clay samples were tested to have medium to high expansion potentials. The findings to date suggest that the expansion potential is stratified with the near surface materials. Clays with higher expansion were encountered below the surficial moderately expansive clays. Expansive soils have the potential to compromise the structural integrity of project features, which could result in a significant impact. The Geotechnical Engineering Study includes recommendations to reduce potential damage to the proposed project, such as proper moisture conditioning and compaction control during site grading of the project site and designing foundations to resist differential soil movement. Without implementation of recommended measures, on-site expansive soils could cause differential movement (either shrink or swell) and significant damage to overlying structures. Thus, the proposed project would have the potential to be exposed to substantial risks related to expansive soils.

Conclusion

From a geotechnical standpoint, provided that the recommendations included in the Geotechnical Engineering Report prepared for the proposed project are implemented into the project design and specifications, the geological and soil conditions on the project site would be adequate to support development of the proposed project. However, conformance with such recommendations cannot be ensured and a final design-level geotechnical engineering report has not yet been prepared. As a result, a ***significant*** impact could occur related to expansive soils.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-3 *The improvement plan submittal shall include a final geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer for City of Davis Community Development Department and Public Works Department review and approval. The report shall address and make recommendations on the following:*

A. Road, pavement, and parking area design;
B. Structural foundations, including retaining wall design (if applicable);
C. Grading practices;
D. Erosion/winterization; and
E. Expansive/unstable soils.

Once approved by the City of Davis Community Development Department and Public Works Department, two copies of the final report shall be provided to the City of Davis Public Works – Engineering and Transportation Department and one copy to City of Davis Community Development Department – Building Division. It is the responsibility of the developer to provide for engineering inspection and certification that earthwork has been performed in conformity with recommendations contained in the report.

If the geotechnical engineering report indicates the presence of critically expansive or other soil problems that, if not corrected, could lead to structural defects, a certification of completion of the requirements of the soils report shall be required for subdivisions, prior to issuance of Building Permits. This certification may be completed on a lot- by-lot basis or on a Tract basis. This shall be so noted on the improvement plans.

4.6-4 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As previously discussed, the project site is underlain by Quaternary-age, Holocene alluvial fan deposits, which generally consist of poorly consolidated stream and lake deposits composed of alluvial gravels, sands, silts, and clays. A Paleontological Records Search for the proposed project was conducted at the UCMP in order to determine the presence of paleontological resources on the project site. Results of the records search determined that two localities have been discovered in the vicinity of the project site. Although the project site does not contain any known paleontological resources or unique geologic features, given the undeveloped nature of the project site, the potential exists that a unique paleontological resource or site could be unearthed during project construction activities.

Based on the above, development of the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. As a result, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.6-4 *Should paleontological resources be discovered during ground-disturbing activities, work shall be halted in the area within 50 feet of the find. Construction may continue in areas outside of the buffer zone. The applicant shall notify the Public Works Department and the City of Davis Community Development Department and retain a qualified paleontologist to inspect the discovery. If deemed significant under criteria established by the Society for Vertebrate Paleontology with respect to authenticity, completeness, preservation, and identification,*

the resource(s) shall then be salvaged and deposited in an accredited and permanent scientific institution (e.g., University of California Museum of Paleontology [UCMP] or Sierra College), where the discovery would be properly curated and preserved for the benefit of current and future generations. The language of this mitigation measure shall be included on any future grading plans, utility plans, and improvement plans approved by the City of Davis Public Works – Engineering and Transportation Department and the City of Davis Public Works – Utilities and Operations Department for the proposed project, where excavation work would be required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional detail regarding the cumulative project setting can be found in Chapter 6, Statutorily Required Sections, of this EIR.

4.6-5 Cumulative increase in the potential for geological related impacts and hazards. Based on the analysis below, the cumulative impact is *less than significant*.

Impacts to geology, soils, seismicity, and paleontological resources related to implementation of the proposed project are analyzed throughout this chapter. As discussed above, existing geological and soil conditions on the project site would generally be adequate to support development of the proposed project. In addition, Mitigation Measure 4.6-3, which requires the preparation and implementation of a final design-level geotechnical engineering report, would ensure the appropriate recommendations are implemented to reduce project-specific impacts related to geology and soils to a less-than-significant level.

While some geologic characteristics may affect regional construction practices, impacts and mitigation measures are primarily site-specific and project-specific. For example, impacts resulting from development on expansive soils at one project site are not worsened by impacts from development on expansive soils or undocumented fill at another project site. Rather, the soil conditions, and the implications of such conditions for each project, are independent.

As such, the potential for cumulative impacts related to geology, soils, seismicity, and paleontological resources, to which implementation of the proposed project might contribute, is ***less than significant***.

Mitigation Measure(s)

None required.

4.7. Hazards and Hazardous Materials

4.7 HAZARDS AND HAZARDOUS MATERIALS

4.7.1 INTRODUCTION

The Hazards and Hazardous Materials chapter of the EIR describes existing and potentially occurring hazards and hazardous materials within the project area. The chapter includes a discussion of potential impacts posed by such hazards to the environment. In addition, surrounding land uses are discussed in order to provide an assessment of whether the proposed project could impact surrounding land uses. The question of whether surrounding land uses could impact future residents of the proposed project is not a question requiring analysis under CEQA.[1]

The Hazards and Hazardous Materials chapter is primarily based on information drawn from a Phase I Environmental Site Assessment (ESA) (see Appendix L)[2] and a Soil Pesticides Investigation (see Appendix M of this EIR)[3] prepared for the proposed project by Brusca Associates, Inc (Brusca). The Phase I ESA and Soil Pesticides Investigation included assessment of the proposed 232-acre project site proposed for urban development. This chapter additionally relies on information from the City of Davis General Plan[4] and the associated General Plan EIR.[5]

4.7.2 EXISTING ENVIRONMENTAL SETTING

The following section includes a definition of hazardous materials and descriptions of the existing conditions associated with the project site related to hazards and hazardous materials.

Hazardous Materials

The term "hazardous substance" refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if the material has characteristics defined as hazardous by such agencies. The California Environmental Protection Agency (CalEPA), California Department of Toxic Substances Control (DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

> […] waste that, because of the quantity, concentration, or physical, chemical, or infectious characteristics of the waste, may do either of the following:

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1 Per the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (*CBIA*), 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." (*Id.* at pp. 377-378.).

2 Brusca Associates, Inc. *Phase I Environmental Site Assessment and Screening Soil Sampling, ASTM Standard E 1527-21 East Covell Boulevard Property*. July 29, 2025.

3 Brusca Associates, Inc. *Soil Pesticides Investigation East Covell Boulevard Property, APN 071-130-007*. January 28, 2025.

4 City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.

5 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School.* Certified May 2001.

(1) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating 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.

The following discussion focuses on the potential Recognized Environmental Conditions (RECs) associated with the project site. A REC indicates the presence or likely presence of any hazardous substances in, on, or at a property due to any release into the environment, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.[6]

Additionally, the following sections include a discussion of historical RECs (HRECs) associated with the project site. A HREC indicates a past release of hazardous substances or petroleum products that has occurred in connection with a property and has been addressed to the satisfaction of the applicable regulatory authority. A HREC does not have any property use restrictions and, thus, does not have any use limitations with respect to future activities on the property. The following discussion also addresses the possibility of controlled RECs (CRECs) associated with the project site. A CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

Project Area Conditions

As discussed in Chapter 3, Project Description, of this EIR, the project site is located north of the intersection of East Covell Boulevard and Alhambra Drive and adjacent to the northeastern boundary of the City of Davis. The project site consists of generally flat land currently used for agricultural activities. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course (Channel A) with associated riparian habitat runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west.

Aerial photography dating back to as early as 1937 shows portions of the site were farmed, likely with dry crops, and that a drainage traversed the northern portion of the site. Aerial photography from 1968 shows portions of the site farmed in row crops. Review of U.S. Geological Survey (USGS) topographic quadrangle maps of the Davis Quadrangle dating from 1952 to 1992 depict two windmills situated on the northern and central portions of the site; the windmills were likely used to pump groundwater from wells for irrigation purposes. In addition, California Department of Conservation Geologic Energy Management Division (CalGEM) mapping and records indicate that a natural gas well was drilled on the property in 1973 and was subsequently plugged and abandoned in 1988. Overall, historic records indicate that the site has consisted of undeveloped farmland from 1930 to the present.

In 2013, Brusca prepared a Phase I ESA to assess potential concerns related to an approximately 500-gallon diesel above-ground storage tank (AST) that was previously located on the northwestern part of the project site (see Figure 4.7-1).

[6] ASTM International. *ASTM E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* 2013.

Figure 4.7-1
Survey Area



*Figure not OCR compatible.

During the site reconnaissance performed by Brusca for the proposed project, Brusca confirmed that the AST has been removed. Additional observations noted by Brusca during the site reconnaissance include an approximately eight-foot deep drainage which traverses the northern portion of the property (Channel A); steel piping on metal supports within the drainage near the western property boundary; an open-ended, rusted/dilapidated steel tank (about four-foot diameter and 20 feet long) on the northwestern portion of the property near the on-site drainage; and minor amounts of rubbish and debris near the tank. In addition, an electrically powered irrigation well was observed along the western margin of the property, and an on-site capped water well and nearby concrete irrigation standpipe were observed along the western property margin to the south of the irrigation well. Access vaults for underground sewer utilities were observed on the northeastern portion of the property and a pole-mounted electrical transformer was observed along the western margin of the property, near the on-site irrigation well. Ponded water was observed throughout portions of the project site due to recent rains.

Potential On-Site Recognized Environmental Conditions

The existing potential RECs associated with the project site are described in further detail below and are based on the Phase I ESA and the Soil Pesticides Investigation.

Organochlorine Pesticides and Arsenic

Organochlorine pesticides (OCPs) are a group of chlorinated compounds used as pesticides. OCPs can enter the environment after pesticide applications and can adhere to the soil and air, increasing the chances of high persistence in the environment. Exposure to pesticides has been concluded to increase the risk of hypertension, cardiovascular disorders, and other health-related problems in humans.[7] Arsenic is a metalloid, which possesses characteristics of both a metal and a non-metal, and is widely distributed in the soil, water, air, and rocks. Arsenic was commonly found in pesticides but has since been removed. The immediate symptoms of acute arsenic poisoning include vomiting, abdominal pain, and diarrhea. Long-term exposure to high levels of inorganic arsenic can lead to cancers of the skin, bladder, and/or lungs, as well as adverse pregnancy outcomes.[8] Naturally occurring arsenic is present in soils throughout the State and low levels of arsenic below DTSC screening levels are therefore commonly encountered.

As previously discussed, the project site has been farmed since at least the 1930s. According to the Phase I ESA, previous agricultural chemical applications to farmland typically do not seriously impair soil chemistry. Pesticide contamination is most commonly attributable to the rinsing of equipment after field application, when rinsing occurs in one place over a period of time. Such rinsing activities are usually performed at a farming headquarters or at an airport supporting crop dusting aircraft. While research conducted by Brusca did not identify evidence of any previous crop dusting or farm headquarters facilities on the project site, a subsequent Soil Pesticides Investigation was performed to collect representative soil samples on a grid pattern across the entire project site for analytical laboratory testing (see Figure 4.7-2).

[7] National Center for Biotechnology Information, U.S. National Library of Medicine, National Institutes of Health. *Organochlorine pesticides, their toxic effects on living organisms and their fate in the environment*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5464684/. Accessed June 2025.

[8] World Health Organization. *Arsenic*. Available at: https://www.who.int/news-room/fact-sheets/detail/arsenic. Accessed June 2025.

Figure 4.7-2
Soils Investigation Report Soil Sampling Locations

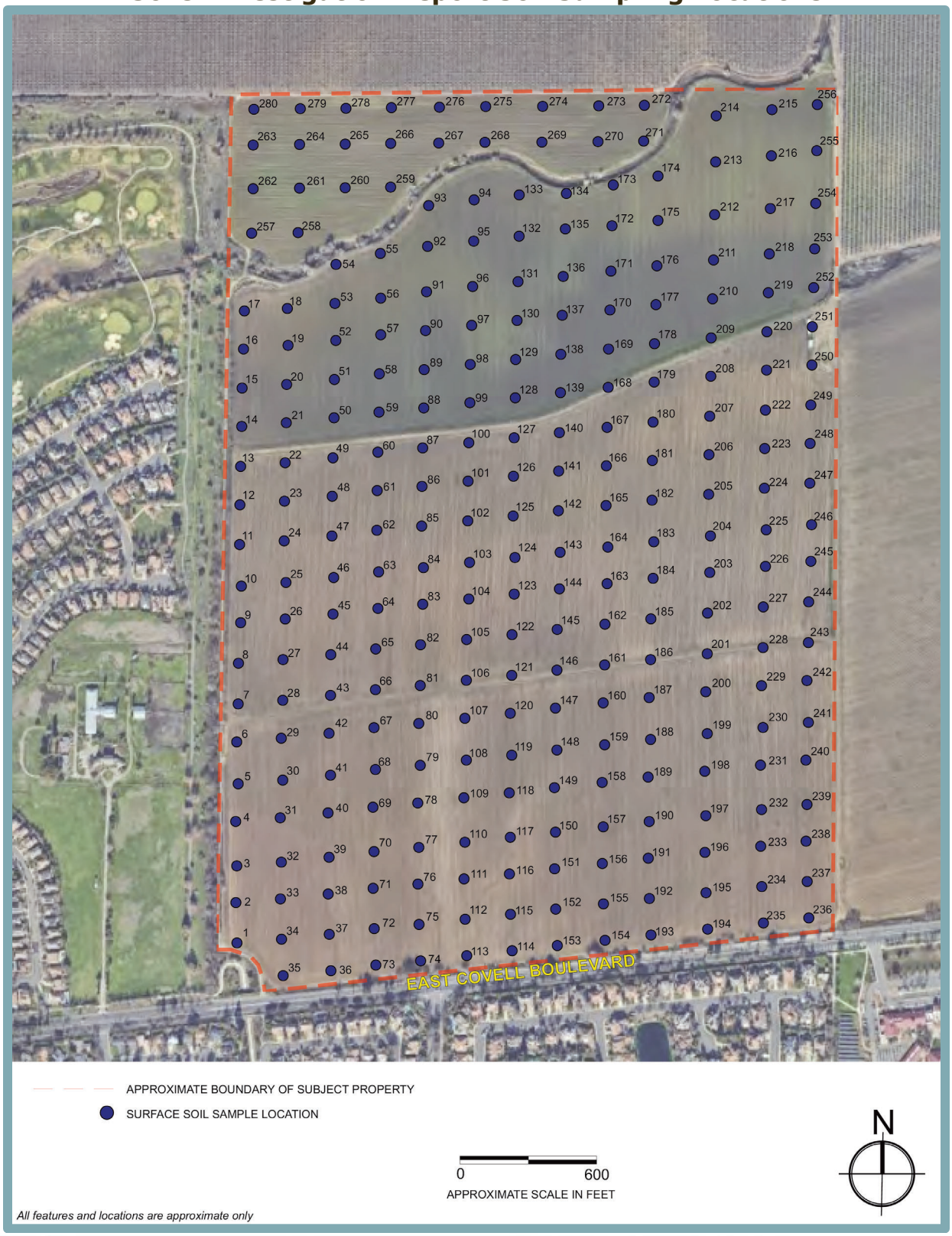


*Figure not OCR compatible.

Overall, the Soil Pesticide Investigation did not identify organochlorine pesticides or arsenic at concentrations above the laboratory reporting limits, or in excess of regulatory screening levels. In one four-part composite soil sample, a low concentration of dieldrin was present. However, the 0.006 milligram per kilogram (mg/kg) concentration of dieldrin detected on-site was determined to occur below the Environmental Screening Level (ESL) of 0.037 mg/kg published by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) for residential properties.

On-Site Wells

An active irrigation well was observed along the western margin of the site, and an apparent capped on-site water well is situated to the south of the active well. Additionally, historical topographic maps show apparent windmills at two locations on the property that were likely used to pump water from wells for crop irrigation. Private wells carry the potential to be contaminated by both naturally occurring sources and by human activities, with contaminants potentially released into the environment through ground-disturbing construction activities in the event the on-site wells are disrupted.

Total Petroleum Hydrocarbons

The term "total petroleum hydrocarbons" (TPH) is used to describe a large family of several hundred chemical compounds. The various chemical compounds originally come from crude oil, which is used to make petroleum products that can potentially contaminate the environment. Exposure to TPH compounds can result in several impacts to human health, including effects on the central nervous system, the blood, immune system, lungs, skin, and eyes.[9]

A Phase I ESA of the project site previously prepared by Brusca in 2013 identified a potential concern regarding an approximate 500-gallon diesel AST that was situated on the northwestern portion of the project site. The AST has since been removed from the site. As part of the Phase I ESA prepared for the proposed project, Brusca performed screening surface soil sampling in the area of the former AST to follow up on concerns regarding the former AST indicated in the 2013 report. Surface soil sampling was conducted at five locations (see Figure 4.7-3). The samples were submitted to a State-certified laboratory for analysis for gasoline-, diesel-, and motor-oil range petroleum hydrocarbons, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX). Results indicated that the screening surface soil samples did not contain petroleum hydrocarbons or BTEX at concentrations above the laboratory reporting limits. As such, potential contamination associated with the formerly on-site AST was not investigated further in the Soil Pesticides Investigation.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals that are not currently produced in the U.S. but were previously used in transformers and are still found in the environment. PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs. The chemicals do not readily break down and, thus, may persist for very long periods of time.

[9] Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services. *ToxFAQs for Total Petroleum Hydrocarbons (TPH)*. Available at: https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=423&toxid=75. Accessed June 2025.

Figure 4.7-3
Former Above-Ground Storage Tank Area



*Figure not OCR compatible.

Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children.[10] PCBs are also known to cause cancer in animals.

As part of the site reconnaissance conducted for the Phase I ESA, Brusca observed an electrical transformer along the western margin of the site near the on-site irrigation well. The transformer was not labeled to indicate whether PCBs were present in the dielectric fluid, but evidence of discharge or leaking was not observed.

Other Potential On-Site Recognized Environmental Conditions

The following additional potential environmental concerns were identified for the project site:

- **Natural Gas Well:** A natural gas well was drilled on the property in 1973 and was subsequently plugged and abandoned in 1988.
- **Storage Tanks and Vent/fill Pipes:** A dilapidated/rusted metal tank was observed on the northwestern portion of the property near the on-site drainage. Additionally, steel piping on metal supports was observed within the drainage near the western property boundary.
- **Rubbish and Debris:** Minor amounts of rubbish and debris were observed near the dilapidated/rusted metal tank.

Potential Nearby Recognized Environmental Conditions

During the field survey conducted as part of the Phase I ESA, Brusca observed a trailer-mounted diesel AST and associated water pumping equipment near an irrigation well on the adjoining property, within about 30 feet to the east of the subject site. Significant staining in the vicinity of the AST or conditions that would suggest that the off-site AST represents a significant concern to the site were not observed.

A review of sites located near the project site that are listed in federal, State, and/or local databases of hazardous materials sites was completed as part of the Phase I ESA. According to the record search conducted by Brusca, the Frontier Fertilizer site, located approximately 4,000 feet south of the project site, appears on multiple regulatory agency listing due to the identified contamination conditions at the site, including the Environmental Protection Agency's (EPA's) "Superfund" listing. Frontier Fertilizer was developed in the 1950's to store agricultural equipment and began large-scale pesticide and herbicide handling around 1972. Activities at the Frontier Fertilizer site included the storage, mixing, and distribution of agricultural chemicals, as well as the discharge of wastes into an unlined "disposal bin" on-site. The aforementioned activities continued on site until about 1987, after which time environmental investigations of the Frontier Fertilizer site were initiated by federal, State, and County agencies. The Frontier Fertilizer site was listed as an EPA Superfund site in 1994 under EPA oversight with concurrent involvement of the DTSC and the Central Valley Regional Water quality Control board (CVRWQCB). The Frontier Fertilizer site has been generally unoccupied and unused except for the performance of investigative and remedial environmental work since the late 1980s.

According to the Phase I ESA, extensive past environmental investigations have identified soil, soil gas, and groundwater contamination conditions attributed to the past handling, storage, and disposal of pesticides/fertilizers at the Frontier Fertilizer site. Although a groundwater

[10] Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services. *ToxFAQs for Polychlorinated Biphenyls (PCBs)*. Available at: https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=140&toxid=26. Accessed June 2025.

contamination plume has been identified that extends north and east of the disposal basin, Brusca determined that the groundwater plume is located at least 3,000 feet south of the project site. In addition, groundwater remediation activities at the Frontier Fertilizer site, including groundwater extraction and treatment, have been conducted for many years and are currently ongoing.

Off-Site Improvement Areas

Off-site improvements associated with the proposed project would include, but are not necessarily limited to, the construction of a 400-foot eastbound left-turn lane at the eastbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection and the construction of a 250-foot westbound right-turn lane at the westbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access. It should be noted that the off-site improvement areas were not specifically evaluated in the Phase I ESA or Soil Pesticides Investigation prepared for the project site.

4.7.3 REGULATORY CONTEXT

The following discussions contain a summary of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the U.S Environmental Protection Agency (USEPA), the Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the National Institute of Health (NIH). Prior to August 1992, the principal agency at the federal level regulating the generation, transport, and disposal of hazardous waste was the USEPA under the authority of the Resource Conservation and Recovery Act (RCRA). On August 1, 1992, however, the California DTSC was authorized to implement the State's hazardous waste management program for the USEPA. The USEPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). The following federal laws and related regulations govern hazardous materials.

Occupational Safety and Health Act

Congress passed the Occupational Safety and Health Act (29 U.S.C. Section 651 et seq. [1970]) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. OSHA requires 40 hours of training for hazardous materials operators, as well as an annual eight-hour refresher course, which includes training regarding personal safety, hazardous materials storage and handling, and emergency response.

Comprehensive Environmental Response, Compensation, and Liability Act

The CERCLA (42 U.S.C. Section 9601 et seq. [1980]) provides a federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the USEPA was given power to seek out those parties responsible for any release and assure their

cooperation in the cleanup. The USEPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act. Through various enforcement tools, USEPA obtains private party cleanup through orders, consent decrees, and other small party settlements. The USEPA also recovers costs from financially viable individuals and companies once a response action has been completed. The USEPA is authorized to implement the CERCLA in all 50 states and U.S. territories.

Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Title III; Section 305[a]) reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definition clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. In addition, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). SARA, Title III provides funding for training in emergency planning, preparedness, mitigation, response, and recovery capabilities associated with hazardous chemicals. Title III of SARA addresses concerns about emergency preparedness for hazardous chemicals, and emphasizes helping communities meet their responsibilities in preparing to handle chemical emergencies and increasing public knowledge and access to information on hazardous chemicals present in their communities.

Resource Conservation and Recovery Act

The RCRA (42 U.S.C. Section 6901 et seq. [1976]) gives USEPA the authority to control hazardous waste from the "cradle-to-grave," which includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for USEPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank (UST) program. States have the authority to implement individual hazardous waste programs in lieu of the RCRA as long as the state program is as stringent as federal RCRA requirements and is approved by the USEPA.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 (15 U.S.C. Section 2601 et seq. [1976]) provides USEPA with authority to require reporting, record-keeping and testing requirements, and restrictions related to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including PCBs, asbestos, radon, and Lead Based Paint (LBP).

U.S. Department of Transportation

Transportation of hazardous materials is regulated by the DOT's Office of Hazardous Materials Safety. The office formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law. The hazardous materials regulations cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. The hazardous materials transportation regulations are codified in 49 CFR Parts 100 to 185.

The hazardous materials transportation regulations require carriers transporting hazardous materials to receive required training in the handling and transportation of hazardous materials. Training requirements include pre-trip safety inspections; use of vehicle controls and equipment, including emergency equipment; procedures for safe operation of the transport vehicle; training on the properties of the hazardous material being transported; and loading and unloading procedures. All drivers must possess a commercial driver's license as required by 49 CFR Part 383. Vehicles transporting hazardous materials must be properly placarded. In addition, the carrier is responsible for the safe unloading of hazardous materials at the site, and operators must follow specific procedures during unloading to minimize the potential for an accidental release of hazardous materials.

Asbestos Hazard Emergency Response Act

The 1986 Asbestos Hazard Emergency Response Act (AHERA) was signed into law as Title II of the TSCA, requiring the Asbestos Model Accreditation Plan (MAP) for accrediting individuals conducting asbestos inspection and corrective-action activities in schools and public and commercial buildings. The MAP provides guidance on the minimum training requirements for accrediting asbestos professionals, such as procedural entry, exit, sampling and monitoring, safety hazards, and relevant federal, State, and local regulatory standards.

Lead-based Paint Regulations

Lead pollutants are regulated by several laws administered by the USEPA, including the TSCA, the Residential Lead-based Paint Hazard Reduction Act of 1992, the Clean Air Act, the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the RCRA, and CERCLA. The aforementioned regulations address lead in paint, dust and soil, and air and water, as well as the disposal of lead wastes. Regulations specific to LBP include, but are not limited to, the Lead Renovation Repair and Painting Program Rule, the Lead Abatement Program, the residential Lead-based Paint Disclosure Program, and Residential Hazards of Lead in Paint, Dust and Soil. Such regulations require risk assessments, inspections, and work practices that work to minimize exposure to lead hazards.

State Regulations

CalEPA and the California State Water Resource Control Board (SWRCB) establish rules governing the use of hazardous materials and the management of hazardous waste. Within CalEPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL). The following discussion contains the applicable State laws.

Regional Water Quality Control Board

The CalEPA and the Office of Emergency Services (OES) establish regulations governing the use of hazardous materials in California. Within CalEPA, DTSC has primary regulatory responsibility for hazardous waste management. Enforcement of regulations can be delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law. Along with the DTSC, the Regional Water Quality Control Board (RWQCB) is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. The RWQCB's regulations are contained in Title 27 of the California Code of Regulations (CCR). The

DTSC, RWQCB, and/or a local agency typically oversee investigation and cleanup of contaminated sites.

Department of Toxic Substances Control

The DTSC was established to protect California against threats to public health and degradation to the environment and to restore properties degraded by past environmental contamination. Through statutory mandates, DTSC cleans up existing contamination, regulates management of hazardous wastes, and prevents pollution by working with businesses to reduce hazardous waste and use of toxic materials in California. DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. In addition, DTSC's Site Mitigation and Brownfields Reuse Program oversees the cleanup of State Superfund sites. State Superfund sites are additionally known as Annual Workplan sites, listed sites, or Cortese List sites. Superfund sites demonstrate evidence of a hazardous substance release or releases that could pose a significant threat to public health and/or the environment. DTSC requires responsible parties to cleanup such sites. When responsible parties cannot be found or where they do not take proper and timely action, DTSC may use State funds to undertake the cleanup.

Cortese List

Pursuant to Government Code Section 65962.5(a), the DTSC must compile and update, as appropriate and at least annually, submit to the Secretary for Environmental Protection a list of all of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. All land designated as hazardous waste property or border zone property pursuant to former Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
3. All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the Health and Safety Code.

California Code of Regulations

Hazardous waste is characterized and defined in CCR, Title 22, Sections 66261.2. Soils that meet the descriptions of the characteristics of hazardous waste defined therein and contain contaminants above regulatory screening levels are considered hazardous waste and must be handled and disposed of as such. The CCR includes the California Health and Safety Code.

California Health and Safety Code

The handling and storage of hazardous materials is regulated at the federal level by the USEPA under CERCLA, as amended by the SARA. Under SARA Title III, a nationwide emergency planning and response program was established that imposed reporting requirements for businesses that store, handle, or produce significant quantities of hazardous or acutely toxic substances as defined under federal laws. SARA Title III required each state to implement a comprehensive system to inform federal authorities, local agencies, and the public when a significant quantity of hazardous, acutely toxic substances are stored or handled at a facility.

Ammonia is an example of an acutely hazardous material (AHM) that is regulated by the California OES under the California Accidental Release Program (CalARP), the USEPA under the Risk Management Program (40 CFR 68), and OSHA under the Process Safety Management Program

(OSHA 1910.119). The CalARP and Risk Management Program require that all facilities that store, handle, or use AHMs above a minimum quantity, known as the threshold planning quantity, are required to develop a plan and prepare supporting documentation that summarizes the facility's potential risk to the local community and identifies safety measures to reduce potential risks to the public.

The HWCL, Chapter 6.5 of the California Health and Safety Code, is administered by the CalEPA to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until the USEPA approves the California program, both the State and federal laws apply in California. The HWCL lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

In California, the underground storage of hazardous materials is regulated by Chapter 6.7 of the California Health and Safety Code, pursuant to the Underground Storage of Hazardous Substances Act. Under Section 25280, the USTs used for the storage of substances hazardous to public health and safety and to the environment are stored prior to use or disposal in thousands of underground locations in the State. The USTs used for storage are potential sources of contamination of the ground and underlying aquifers, and may pose other dangers to public health and the environment. Chapter 6.7 establishes orderly procedures that will ensure that newly constructed USTs meet appropriate standards and that existing tanks be properly maintained, inspected, tested, and upgraded so that the health, property, and resources of the people of the State will be protected.

California Vehicle Code Section 31303

The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) are the enforcement agencies for hazardous materials transportation regulations. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations. California Vehicle Code Section 31303 regulates the transport of hazardous materials.

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by OES, which coordinates the responses of other agencies, including CalEPA, CHP, California Department of Fish and Wildlife (CDFW), Central Valley RWQCB, and the Davis Fire Department (DFD).

Unified Hazardous Materials Management Regulatory Program

On January 1, 1996, CalEPA implemented a unified hazardous waste and hazardous materials management regulatory program (Unified Program), to consolidate the administration of specified statutory requirements for the regulation of hazardous wastes and materials. The Unified Program is implemented at the local level by government agencies certified by the Secretary of CalEPA. The Certified Unified Program Agency (CUPA) is responsible for implementation of the Unified Program. CUPA is certified and responsible for oversight of the following consolidated programs: Hazardous Materials Release Response Plans and Inventories (Business Plans); California Accidental Release Program; Underground Storage Tank Program; Aboveground Petroleum Storage Act; Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered

permitting) Programs; and California Uniform Fire Code: Hazardous Materials Management Plans and Hazardous Material Inventory Statements.

Local Regulations

Relevant Yolo County guidelines and regulations, as well as City of Davis General Plan goals and policies, related to hazards and hazardous materials are discussed below.

Yolo County Environmental Health Division

The Yolo County Environmental Health Division (YCEHD) is the CUPA for local implementation of the California Accidental Release Prevention Program and several other hazardous materials and hazardous waste programs. YCEHD is responsible for regulating hazardous materials business plans and chemical inventory, hazardous materials storage, hazardous materials management plans, and risk management plans. The goal of YCEHD is to protect and enhance the quality of life of Yolo County residents by identifying, assessing, mitigating, and preventing environmental hazards.

Hazardous materials incidents that require emergency response are handled by the Yolo County Environmental Health HazMat Unit, along with local fire and law enforcement agencies. The level of response is dependent on the size and nature of the incident and the level of threat to public health and the environment. The Yolo County Environmental Health HazMat Unit also handles all after-hours calls and complaints for YCEHD, including sewage spills, food-borne illness complaints, abandoned waste, animal bite reports, housing complaints, and communicable disease reports. HazMat Unit staff work closely with other YCEHD staff in handling matters after hours.

Yolo County Emergency Operations Plan

The Yolo County Emergency Operations Plan (EOP) provides the structure and processes that all partner agencies within the County use to respond to and recover from major emergency or disaster events.[11] The Yolo County EOP provides an overview of the jurisdiction's approach to emergency operations. It identifies emergency response policies, describes the response and recovery organization, and assigns specific roles and responsibilities to County departments, agencies, and community partners. The EOP has the flexibility to be used for all emergencies and will facilitate response and recovery activities efficiently and effectively.

Yolo County Operational Area Hazard Mitigation Plan

The 2023 Yolo County Operational Area Hazard Mitigation Plan (HMP) was prepared to support the EOP and is an update to the previous 2018 plan. The HMP was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that Yolo County would be eligible for the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation and Hazard Mitigation and Grant Programs. The HMP is a multi-jurisdictional plan that geographically covers the entire area within Yolo County's jurisdictional boundaries, which includes the cities of Davis, West Sacramento, Winters, and Woodland. The purpose of the HMP is to reduce the risk to life and property in Yolo County by decreasing the long-term vulnerability from hazards through coordinated planning, partnerships, capacity building, and effective risk-reduction measures.

[11] Yolo County Office of Emergency Services. *County of Yolo Emergency Operations Plan.* June 6, 2024.

City of Davis General Plan

The following goals and policies from the City's General Plan related to hazards and hazardous materials are applicable to the proposed project.

Hazards Chapter

Goal HAZ 3 Provide for the safety and protection of citizens from natural and environmental hazards.

Policy HAZ 3.1 Provide for disaster planning.

Goal HAZ 4 Reduce the use, storage, and disposal of toxic and hazardous substances in Davis, and promote alternatives to such substances and their clean up.

Policy HAZ 4.1 Reduce and manage toxics within the planning area.

Policy HAZ 4.2 Provide for the proper disposal of hazardous materials in Davis.

Policy HAZ 4.3 Reduce the potential for pesticide exposure for people, wildlife and the environment.

Policy HAZ 4.4 Increase awareness of agricultural chemical use impacting Davis residents.

Policy HAZ 4.5 Minimize impacts of hazardous materials on wildlife inhabiting or visiting the Davis area.

Policy HAZ 4.7 Ensure that remediation of hazardous waste sites is conducted in the most timely and environmentally responsible manner possible.

City of Davis Multi-Hazard Functional Planning Guide

According to the City's General Plan, the DFD maintains the City's Multi-Hazard Functional Planning Guide, which plans for emergency management and evacuation in the event of disasters. The Guide includes operating procedures in the event of a disaster, as well as descriptions of emergency evacuation routes in Davis.

4.7.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to hazards and hazardous materials. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

In accordance with CEQA Guidelines Appendix G, an impact related to hazards and hazardous materials is considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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 (see Chapter 5, Effects Not Found to be Significant);
- 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 in the project area (see Chapter 5, Effects Not Found to be Significant);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or
- Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires (see Chapter 4.15, Wildfire).

As noted above, impacts related to whether the proposed project would result in any of the following impacts are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- 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 (see Chapter 5, Effects Not Found to be Significant); and
- 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 in the project area (see Chapter 5, Effects Not Found to be Significant).

Impacts related to wildland fires are addressed in detail in Chapter 4.15, Wildfire, of this EIR. Thus, further discussion related to exposure of people or structures, either directly or indirectly, to the risk of loss, injury, or death involving wildland fires is not included in this chapter.

Method of Analysis

The following sections describe the methods of analysis used to determine the presence of RECs and other potential hazards for the Phase I ESA and Soil Pesticides Investigation prepared for the proposed project by Brusca.

Phase I Environmental Site Assessment

Brusca performed a Phase I ESA for the project site to evaluate whether evidence of RECs exists that indicate the site could have been impacted by releases of hazardous materials. The Phase I ESA was performed in general accordance with the American Society for Testing and Materials (ASTM) E1527-21 standard. The following tasks were performed as part of the Phase I ESA:

- Historical records such as aerial photographs, historical topographic maps, City directories, and other readily available historical sources were evaluated, as available, to research the history of the site and vicinity;

- Federal, State, and local environmental databases were reviewed to identify sites that use, store, or have released hazardous materials. The database search was performed by Environmental Data Resources, Inc. (EDR), an environmental database research firm. The EDR database reports (presented as Appendix D to the Phase I ESA [see Appendix L of this EIR]) provide federal and State information intended to meet ASTM guidelines for Phase I ESAs. Regulatory files were reviewed for the identified sites, subject to the limitations of the ASTM guidance document;
- A surface reconnaissance of the project site and surrounding off-site areas visible from the site boundaries was performed on foot by Brusca on January 30, 2024; and
- Persons with knowledge of the site were interviewed.

For further details regarding the methodology and results of the Phase I ESA prepared by Brusca, please see Appendix L of this EIR.

Soil Pesticides Investigation

Brusca performed a Soil Pesticides Investigation for the project site to evaluate whether historical agricultural activities on the site resulted in elevated concentrations of residual pesticides in site surface soils. The Soil Pesticides Investigation was performed in general accordance with CalEPA, DTSC Interim Guidance for Sampling Agricultural Properties. The following tasks were performed as part of the Soil Pesticides Investigation:

- Soil sampling at the site between January 13 and 16, 2025 (see Figure 4.7-2);
- Analytical laboratory testing by EPA Method 8081A and EPA Method 6010b; and
- Preparation of laboratory report and chain-of-custody documentation.

Brusca collected 280 soil samples in a grid pattern across the 232-acre site. At each sampling location, a soil sample was collected between the surface and a depth of six inches deep. Each soil sample was immediately transferred to a laboratory-provided, four-ounce glass jar, labeled, and placed on ice for transport to a State-certified analytical laboratory under chain-of custody. From the set of soil samples collected, the laboratory was instructed to create four-part composite samples for analysis for OCPs by EPA Method 8081A. One discrete soil sample from each four-sample set was analyzed for arsenic by EPA Method 6010b.

For further details regarding the methodology and results of the Soil Pesticides Investigation prepared by Brusca, please see Appendix M of this EIR.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.7-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Based on the analysis below, the impact is *less than significant*.

A significant hazard to the public or the environment could result from the routine transport, use, or disposal of hazardous materials. Projects that involve the routine transport, use, or disposal of hazardous materials are typically industrial in nature. The

proposed project would not be industrial in nature, as the proposed project would primarily result in residential uses, with other uses including an Urban Agricultural Transition Area (UATA), a park and neighborhood greenbelt, and neighborhood retail areas, none of which are industrial. During operations, hazardous material use would be limited to landscaping products such as fertilizer, pesticides, and typical commercial and maintenance products (cleaning agents, degreasers, paints, batteries, and motor oil). Retail, residential, and landscaping activities would include the proper handling and usage of such materials in accordance with label instructions, which would ensure that adverse impacts to human health or the environment would not occur. Therefore, operation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Construction activities associated with development of the proposed project, including the proposed off-site improvements, would involve the use of heavy equipment containing fuels, oils, and various other products such as concrete, paints, and adhesives. The project contractor would be required to comply with all California Health and Safety Codes, as well as with local ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Pursuant to California Health and Safety Code Section 25510(a), except as provided in subdivision (b),[12] the handler or an employee, authorized representative, agent, or designee of a handler, must, upon discovery, immediately report any release or threatened release of a hazardous material to the CUPA (in the case of the proposed project, the YCEHD) in accordance with the regulations adopted pursuant to Section 25510(a). The handler or an employee, authorized representative, agent, or designee of the handler must provide all relevant State, City, or County personnel with access to the handler's facilities. For the proposed project, the contractors would be required to notify the YCEHD in the event of an accidental release of a hazardous material, who would then monitor the conditions and recommend appropriate remediation measures.

Based on the above, the proposed project would not create a significant hazard to the public or the environment through the routine handling, transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact could occur.

Mitigation Measure(s)
None required.

4.7-2 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. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The following discussions detail the potential for the proposed project to create a significant hazard to the public or the environment through the likely release of OCPs and arsenic, PCBs, TPH, and other potential RECs. In accordance with the *California*

[12] Subdivision (a) does not apply to a person engaged in the transportation of a hazardous material on a highway that is subject to, and in compliance with, the requirements of Sections 2453 and 23112.5 of the Vehicle Code.

Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (CBIA), where existing hazardous conditions already occur on the project site or vicinity, the discussions below focus on the potential for development of the proposed project to exacerbate risks associated with such conditions.

Organochlorine Pesticides and Arsenic

As previously discussed, the project site has been farmed since at least the 1930s. Testing for persistent pesticide residues (such as arsenical pesticides or OCPs) is generally considered appropriate if an agricultural property would be developed for residential or other sensitive land uses, or if shallow soil would be exported from an agricultural property for residential use. According to the Soil Pesticides Investigation, OCPs and arsenic were not detected in any of the 280 discrete surface soil samples obtained from the project site. Specifically, laboratory analysis indicated that OCPs were not present in soils collected at areas formerly used as agricultural fields at concentrations above laboratory reporting limits, except in one four-part soil sample containing a low concentration of dieldrin at 0.006 mg/kg. However, the detected concentration was determined to be well below the residential ESL published by the SFBRWQCB (0.037 mg/kg). Similarly, arsenic was not present in soils collected at areas formerly used as agricultural fields at a concentration exceeding the applicable laboratory reporting limit (2.0 mg/kg). Based on the findings of the Phase I ESA, past use of the site for agricultural purposes has not created a significant hazard to the public or environment associated with arsenical pesticides or OCPs on the project site.

On-Site Wells

As part of the site reconnaissance conducted for the Phase I ESA, an active irrigation well was observed along the western margin of the site, and an apparent capped on-site well is situated to the south of the active well. Additionally, historical topographic maps show apparent windmills at two locations on the property that were likely used to pump water from wells for crop irrigation. The Phase I ESA recommended that if the future use of the project site does not include the use of the on-site wells, the wells should be abandoned in accordance with local and State guidelines. If the on-site water wells are to be abandoned, the project applicant would be required to abandon the foregoing wells in accordance with the standards set forth in California Department of Water Resources Bulletin 74-81. Thus, without abandonment of the on-site wells prior to project implementation, a significant hazard to the public or environment could be created.

Total Petroleum Hydrocarbons

A Phase I ESA prepared by Brusca in 2013 that encompassed the project site identified potential concerns regarding an approximately 500-gallon diesel AST that was situated on the northwestern portion of the project site. According to the Phase I ESA prepared for the proposed project, the AST has since been removed from the site. Laboratory analysis of soil samples obtained from the previous AST site did not detect concentrations of TPH or BTEX at concentrations above the laboratory reporting limits. Based on the findings of the Phase I ESA, past use of the former on-site diesel AST has not created a significant hazard to the public or environment related to the release of TPH.

Polychlorinated Biphenyls

During the site reconnaissance conducted for the Phase I ESA, an electrical transformer was observed along the western margin of the project site near the on-site irrigation well. The transformer was not labeled to indicate whether PCBs were present in the dielectric fluid, but evidence of discharge or leaking was not observed. Based on the findings of the Phase I ESA, past use of the electrical transformer on-site has not created a significant hazard to the public or environment associated with PCBs.

Other Potential On-Site RECs

A records search of CalGem mapping records performed as part of the Phase I ESA indicated that a natural gas well was drilled in the northwestern portion of the property in 1973 and was subsequently plugged and abandoned in 1988. Brusca did not identify environmental concerns regarding the former on-site natural gas well. Furthermore, as discussed in Chapter 3, Project Description, of this EIR, the northwestern section of the site would be maintained as part of the UATA. Thus, disturbance of the abandoned well due to development of the proposed project would be unlikely.

During the Phase I ESA site reconnaissance, a dilapidated/rusted metal tank was observed on the northwestern portion of the property near the on-site drainage. Brusca was not able to identify the purpose of the tank. However, evidence of staining or other environmental concerns were not identified. Additionally, steel piping on metal supports was observed within drainage Channel A near the western property boundary. Brusca determined that the steel piping and metal supports appeared to be remnant from past water pumping from Channel A for agricultural irrigation purposes.

Other RECs identified during the Phase I ESA site reconnaissance include ponded water due to recent rains and minor amounts of rubbish and debris observed near the dilapidated/rusted metal tank. Brusca determined that the materials associated with the rubbish and debris appeared to be environmentally innocuous. Based on the findings of the Phase I ESA, past use of a natural gas well on-site, as well as the occurrence of a dilapidated/rusted metal tank and steel piping on-site, has not created a significant hazard to the public or environment associated with other possible RECs.

Potential Nearby Recognized Environmental Conditions

As previously discussed, the record search conducted by Brusca identified the Frontier Fertilizer site (located approximately 4,000 feet south of the project site) as a contamination site. Frontier Fertilizer has a history of agricultural equipment storage, large-scale pesticide and herbicide handling, storage, mixing, and distribution of agricultural chemicals, as well as the discharge of wastes into an unlined “disposal bin” on-site. However, such activities were discontinued after the Frontier Fertilizer site was listed as an EPA Superfund site in 1994 under EPA oversight with concurrent involvement of the DTSC and the CVRWQCB. The Frontier Fertilizer site has been generally unoccupied and unused except for the performance of investigative and remedial environmental work since the late 1980s. While extensive past environmental investigations have identified soil, soil gas, and groundwater contamination conditions attributed to the past handling, storage, and disposal of pesticides/fertilizers at the Frontier Fertilizer site, including a groundwater contamination plume located approximately 3,000 feet south of the project site, Brusca concluded that the known

contamination conditions associated with the Frontier Fertilizer site are not an environmental concern to the project site.

Conclusion

Based on the above, without proper abandonment of on-site wells, development of the proposed project could 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. Therefore, a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.7-2 *Prior to commencement of construction activities, the project applicant shall hire a licensed well contractor to obtain a well abandonment permit from YCEHD for all on-site water supply wells that will not be used, and properly abandon the on-site water supply wells in accordance with Department of Water Resources Bulletin 74-81 (Water Well Standards, Part III). Verification of abandonment shall be submitted for review and approval of the City of Davis Department of Public Works, Department of Community Development and YCEHD.*

4.7-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Based on the analysis below, the impact would be *less than significant*.

The project site is approximately 0.11-mile to the northwest of Frances Ellen Watkins Harper Junior High School (Harper Junior High), which is located at 4000 East Covell Boulevard. Therefore, the proposed project would be located within 0.25-mile of an existing school. However, as discussed under Impact 4.7-1, projects that emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste are typically industrial in nature. The proposed project would not be industrial in nature and would consist primarily of residential uses, with other uses including UATA, a park and greenbelt area, and neighborhood retail area, none of which are industrial. Thus, operation of the proposed project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within proximity to Harper Junior High.

Construction activities associated with the buildout of the proposed project would include soil-disturbing activities related to site preparation, grading, trenching for utilities, and project construction. If such soil disturbance resulted in the emission, removal, or transportation of contaminated soils, a significant impact could occur. As discussed under Impact 4.7-2, based on the Phase I ESA and Soil Pesticides Investigation prepared for the proposed project, impacts related to OCPs, PCBs, TPH, and other potential RECs would be less than significant. Although construction activities would disturb on-site soils, soil sampling confirmed that on-site soils are not

contaminated. As such, impacts related to windblown dust caused during construction of the proposed project are not hazardous.

Based on the above, while the project site is located within 0.25-mile of Harper Junior High, the proposed project would not result in substantial adverse effects related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.7-4 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Based on the analysis below, the impact would be *less than significant.*

The City of Davis does not have an adopted emergency evacuation plan. However, according to the City's General Plan, the DFD maintains the City's Multi-Hazard Functional Planning Guide, which plans for emergency management and evacuation in the event of disasters. The Multi-Hazard Functional Planning Guide includes operating procedures in the event of a disaster and descriptions of routes in the City to take in the event of an emergency. According to the guide, all major roads are available for evacuation, depending on the location and type of emergency that arises. Major roads identified for evacuation include, but are not limited to, State Route (SR) 113, Interstate 80, Pole Line Road, East Covell Boulevard, F Street, and Mace Boulevard. Off-site roadway improvements associated with the proposed project would include, but are not necessarily limited to, the construction of a 400-foot eastbound left-turn lane at the eastbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection and the construction of a 250-foot westbound right-turn lane at the westbound approach to the East Covell Boulevard/Alhambra Drive/Westerly Project Access.

During project construction, temporary lane closures on the roadways in the vicinity of the project site, including East Covell Boulevard, may be required; however, any temporary lane closures would be coordinated with City police and fire departments and complete closure of the roadways is not anticipated. Increased peak hour traffic volumes during operation could potentially slow traffic during emergency situations. However, East Covell Boulevard has traffic signals equipped with emergency vehicle pre-emption, providing signal priority to emergency vehicles in the event of an emergency. Additionally, the Davis Fire Department has identified the potential need for a 2.0-acre fire station site in the northeastern portion of the City. In the event that the facility is not accommodated elsewhere, the proposed project has reserved land to accommodate the fire station on the southwestern HDR parcel, adjacent to East Covell Boulevard. The fire station would ultimately be designed and implemented by the DFD, but could consist of a four-bay fire station and a small space to support police personnel. The fire station would have a dedicated entry and exit onto East Covell Boulevard. Overall, implementation of City emergency response plans would not be impaired and emergency access throughout the project site would be provided by internal circulation.

Based on the above information, the proposed project would not interfere with or impair implementation of an adopted emergency response plan or emergency evacuation plan. Therefore, the project would result in a ***less-than-significant*** impact.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.7-5 Cumulative exposure to potential hazards, and increases in the transport, storage, and use of hazardous materials. Based on the analysis below, the cumulative impact is *less than significant.*

Hazardous materials and other public health and safety issues are generally site-specific and/or project-specific and would not be significantly affected by other development within the project area. As demonstrated throughout this chapter, potential impacts associated with hazardous materials related to development of the proposed project were found to be less than significant with incorporation of mitigation. Cumulative development projects would be subject to the same federal, State, and local hazardous material management requirements as the proposed project, which would minimize potential risks associated with increased hazardous materials use in the community.

Increased peak hour traffic volumes associated with cumulative conditions could potentially slow traffic during emergency situations. However, as previously discussed, East Covell Boulevard traffic signals would provide priority to emergency vehicles in the event of an emergency and the roadway improvements included under the proposed project would improve circulation and emergency access in the vicinity. Overall, cumulative impacts associated with exposure to potential hazards, and increases in transport, storage, and use would be ***less than significant***.

Mitigation Measure(s)
None required.

4.8. Hydrology and Water Quality

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 INTRODUCTION

The Hydrology and Water Quality chapter of the EIR describes existing drainage patterns on the project site, current stormwater flows, and stormwater infrastructure. The chapter also evaluates potential impacts of the proposed project with respect to increases in impervious surface area and associated stormwater flows, degradation of water quality, and increases in on- and off-site flooding. Information used for the chapter was primarily drawn from the Revised Preliminary Stormwater Control Plan prepared for the proposed project by Balance Hydrologics (see Appendix N)[1] and the Flood Protection Memorandum prepared by Carlson, Barbee & Gibson, Inc. (CBG) to address operational peak flows and runoff volumes (see Appendix O).[2] Further information was drawn from the City of Davis General Plan[3] and the City's General Plan EIR.[4] Issues associated with water supply availability are addressed in Chapter 4.14, Utilities and Service Systems, of this EIR.

4.8.2 EXISTING ENVIRONMENTAL SETTING

The section below describes regional hydrology, the existing drainage patterns within the project site, including peak flows, existing water quality, and groundwater conditions.

Regional Hydrology

The approximately 232-acre project site is located north of the intersection of East Covell Boulevard and Alhambra Drive in a currently unincorporated portion of Yolo County, California. According to the General Plan EIR, the Sacramento River and the Yolo Bypass drain waters throughout Yolo County, which is part of the Sacramento River Flood Control Project. The largest surface waterway in the region is Putah Creek, which drains approximately 600 square miles. Other major waterways that drain unincorporated County areas around the City include Willow Slough Bypass to the north, which empties into the Yolo Bypass. Willow Slough Bypass is a leveed channel that drains approximately 204 square miles and receives flows from Willow, Cottonwood, Chickahominy, and Dry Sloughs south of Cache Creek.

The soils in the eastern portion of Yolo County contain high amounts of clay, which limits infiltration rates and consequently causes high runoff rates. Flooding has frequently occurred in Willow Slough, Dry Slough, and Davis area watersheds north of Putah Creek. Yolo County has been mapped by the Federal Emergency Management Agency (FEMA) as being part of the National Flood Insurance Program (NFIP), which identifies areas of potential flooding and their associated risks.

Flooding tends to increase in the City of Davis area when either flood waters from western Yolo County exceed the capacity of creeks and sloughs flowing easterly near the City (e.g., flows in

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1 Balance Hydrologics. *Revised Preliminary Stormwater Control Plan, Willowgrove, City of Davis*. June 2025.
2 Carlson, Barbee & Gibson, Inc. *Flood Protection Memorandum*. June 30, 2025.
3 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
4 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.

Dry Creek west of the City have frequently caused flooding in the area), and/or when flood waters from the Sacramento River back up into the Yolo and Willow Slough Bypasses, impeding gravity flow from the systems. Floodwaters from local drainages subsequently back up and pond behind the levees of the bypasses until flood flows in the bypasses recede. In addition, a dam inundation study prepared for the Bureau of Reclamation shows that flooding would occur in the City of Davis if Monticello Dam (Lake Berryessa) on Putah Creek, 23 miles west of the City, were to fail.[5]

Flood protection for the City from the Sacramento River is provided by storage and flood control projects upstream on the Sacramento River and on tributaries to the Sacramento River. Internal drainage within the Davis City Limits is captured by various storm drain collection systems and detention ponds. The ponds provide storage and reduce peak flood flows to the channels that flow to Willow Slough Bypass or the Yolo Bypass.

Project Site and Surrounding Area Drainage

The project site is currently used for agricultural activities, with approximately 230.6 acres historically and currently planted with row crops. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Channel A includes an existing culvert, which serves as the current vehicle crossing for the existing agricultural operations. The site is relatively flat and generally slopes towards the northeast, with elevations ranging from 32 feet in the northeastern portion of the site to 39 feet in the southwestern corner. A portion of the project site lies within the Covell Drain watershed, which is approximately 17 square miles and drains to the east to the Willow Slough Bypass. The remainder of the site is located within the East Davis Watershed. The only existing storm water infrastructure on the project site is Channel A, which flows to the East Davis watershed. With respect to immediately adjacent storm water infrastructure, the City of Davis maintains a storm drain pipe network within East Covell Boulevard to the south.

According to the Revised Preliminary Stormwater Control Plan prepared for the proposed project, all on-site runoff eventually discharges to Channel A, the on-site portion of which is contained within Drainage Management Area (DMA) 3 (see Figure 4.8-1). After crossing the northern portion of the site from west to east, Channel A then continues for approximately 1.5 miles to discharge into Willow Slough, a relatively large drainage channel. Flows within Willow Slough eventually discharge into the Yolo Bypass at a point just north of Interstate 80 (I-80). Runoff from the other portions of the project site located south of Channel A generally flows west to east to a ditch along the eastern project site boundary and joins Channel A from the south at a point approximately 200 feet north of the northern project site boundary.

Flooding

The project site is located within FEMA Flood Insurance Rate Map (FIRM) 06113C0604G, effective June 18, 2010. The FIRM shows that the northeastern portion of the site is located within Zone A, which is defined as a Special Flood Hazard Area (SFHA) determined to flood during the one percent annual flood event (see Figure 4.8-2). The remainder of the site is located within Zone X, which is not a SFHA.

[5] Bureau of Reclamation. *Monticello Dam Failure Analysis.* April 12, 2023.

Figure 4.8-1
Existing On-Site Drainage Conditions

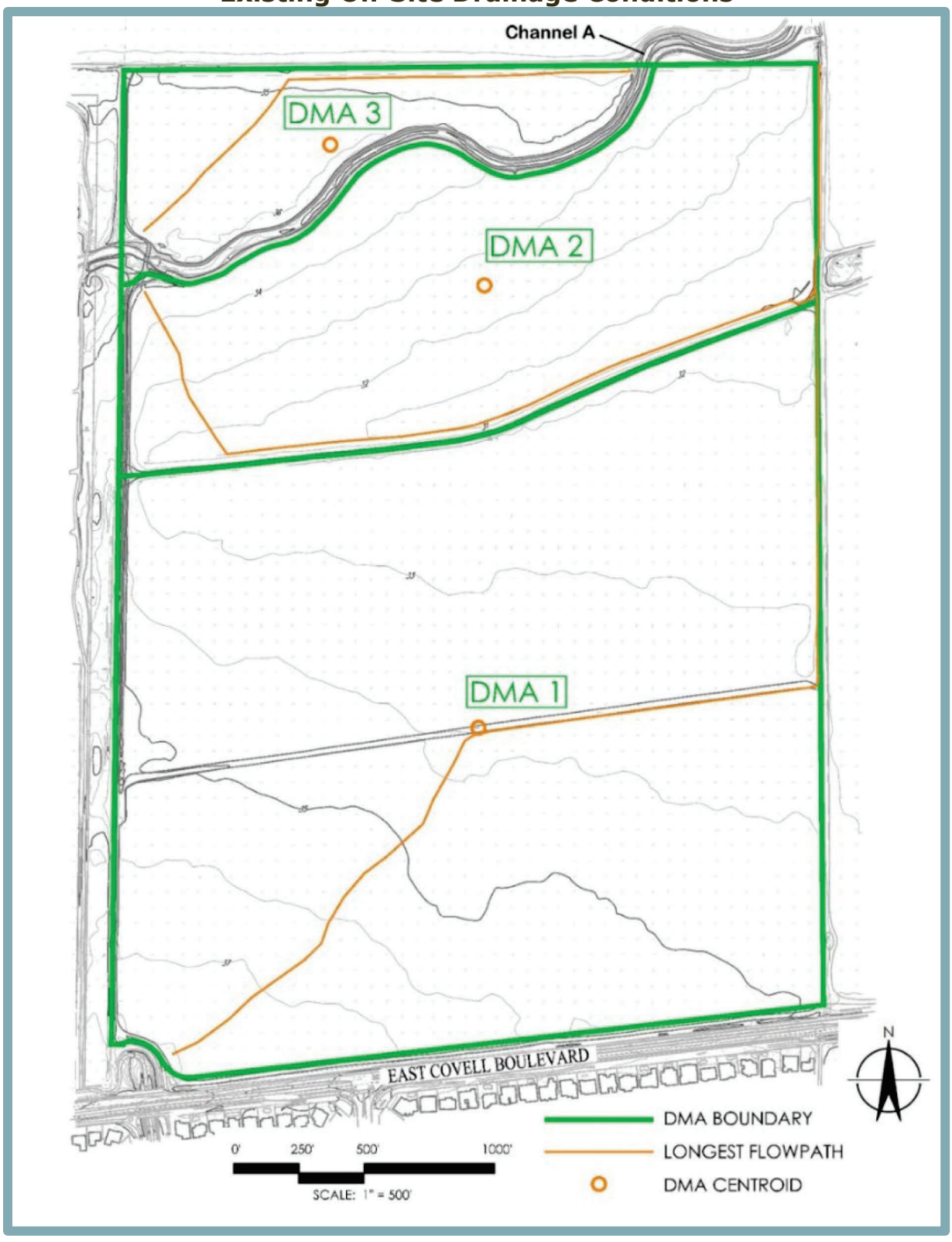
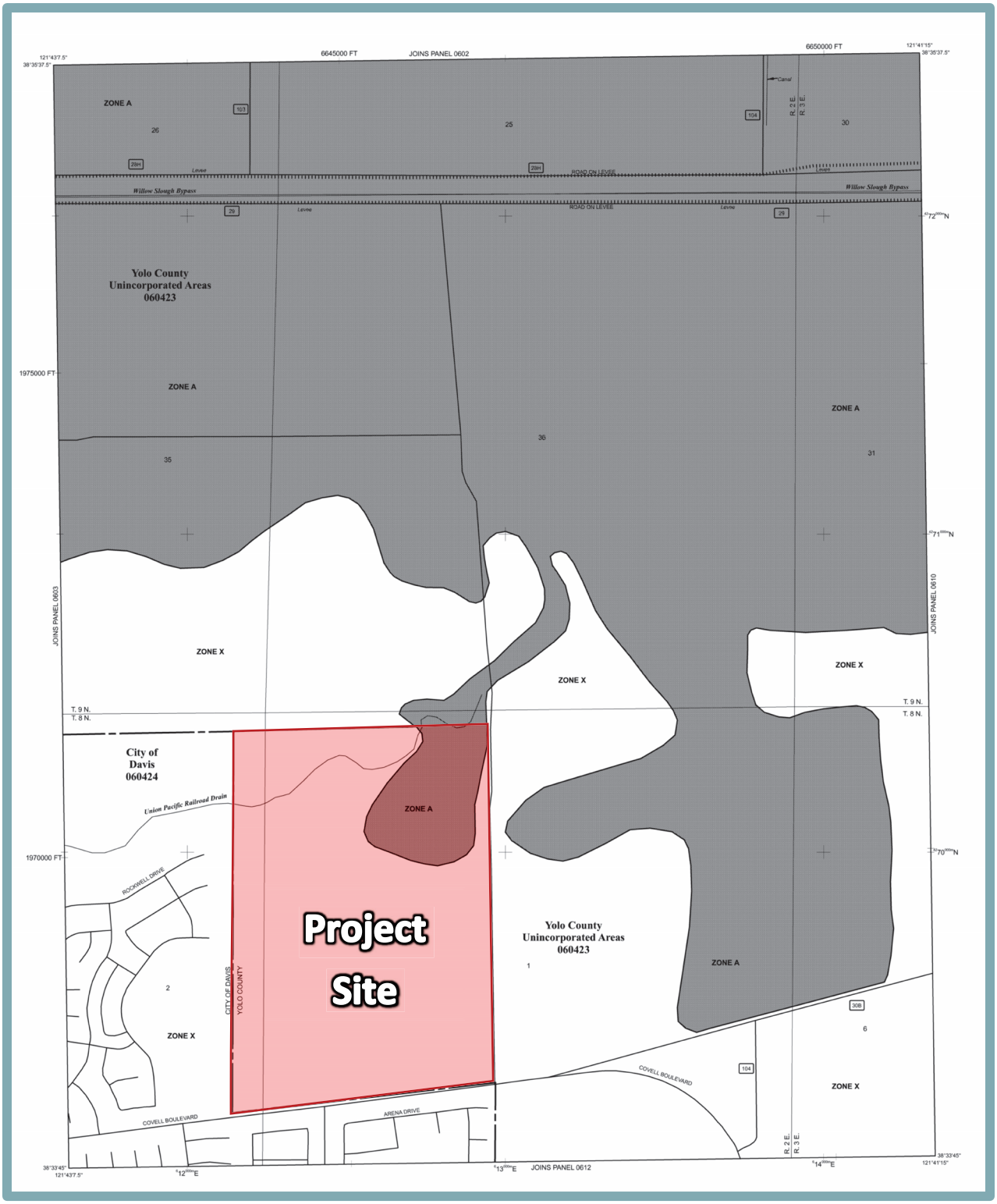


*Figure not OCR compatible.

Figure 4.8-2
FEMA FIRM 06113C0604G



Storm water flow in Channel A continues east out of the City before turning north, ultimately discharging into the Willow Slough Bypass. Discharge into the Willow Slough Bypass is regulated by flap gates in the culverts penetrating the levees; during peak flows in the Willow Slough Bypass, the flap gates remain shut.

During this condition, flow from the Covell Drain watershed spills east out of the channelized flow and flows overland into the East Davis watershed, resulting in ponding and flooding through the eastern reaches of the watershed. Consistent with this phenomenon, the Revised Preliminary Stormwater Control Plan notes that the on-site flooding source would be regional flooding from the Willow Slough Bypass and/or backwater flooding from the Yolo Bypass approximately 3.5 miles east of the site, not from Channel A.

Surface Water Quality

Activities and/or conditions that could degrade water quality include, but are not limited to, construction activities and urban stormwater runoff. Construction activities have the potential to cause erosion and sedimentation associated with ground-disturbing and clearing activities, which could cause unstabilized soil to be washed or wind-blown into nearby surface water. In addition, the use of heavy equipment during construction activities, especially during rainfall events, has the potential to cause petroleum products and other pollutants to enter nearby drainages.

Water quality degradation from urban stormwater runoff is primarily the result of runoff carrying pollutants from the land surface (i.e., streets, parking lots, etc.) to the receiving waters (i.e., streams and lakes). Pollutants typically found in urban runoff include facility maintenance and lawn-care/landscaping chemicals (insecticides, herbicides, fungicides and rodenticides), heavy metals (such as copper, zinc and cadmium), oils and greases from automobiles and other mechanical equipment, and nutrients (nitrogen and phosphorus).

According to the City's General Plan EIR, pollutant concentrations in Davis surface water are highly variable, depending on urban densities, land uses, and the time since the last rains that produced surface runoff. The Covell Drain and other surface drainage ditches are typically intermittent and often do not have appreciable surface flow during the dry season. During the low-flow periods, surface water from the Covell Drain and Channel A may contain detectable amounts of agricultural pollutants, such as pesticides, herbicides, and fertilizers from agricultural return water. The Covell Drain could also contain some pollutants associated with urban runoff from the Stonegate watershed in west Davis.

Groundwater

The project site is located within the Yolo Subbasin and the jurisdiction of the Yolo Subbasin Groundwater Authority (YSGA). The YSGA was formed in 2017 in order to comply with the Sustainable Groundwater Management Act (SGMA). The goal of the YSGA is to manage the entire Yolo Subbasin by protecting against overdraft and creating sustainable water supplies.

According to the Groundwater Sustainability Plan for the Yolo Subbasin, the local aquifer system can be delineated into three zones. The shallow zone extends from the surface to a depth of approximately 220 feet and is predominantly alluvium (and the top of the upper Tehama Formation). The intermediate zone extends from depths of approximately 220 to 600 feet and is entirely within the upper Tehama Formation, believed to be largely alluvial plains with distributary channel and sheet flood sands interbedded in silts and clays. The deposits are believed to be slightly more consolidated than the shallow zone, although the coarser beds may remain loose.

The deep zone extends from depths of approximately 600 to 1,500 feet within the upper Tehama Formation. The lower Tehama Formation (generally below a depth of 1,500 feet) is not typically utilized for groundwater extraction,[6] although the City of Davis operates deep aquifer wells with groundwater extraction below 1,500 feet.

The Yolo Subbasin is not identified by the California Department of Water Resources (DWR) as being in a state of overdraft.[7] Groundwater overdraft is a condition within a developed groundwater basin in which the amount of water pumped from the basin exceeds the sustainable yield of the basin over the long term.

As identified by the Geotechnical Engineering Study prepared for the proposed project (see Appendix K),[8] groundwater was encountered during on-site borings at a depth of approximately 40 feet below ground surface (bgs). In addition, the Geotechnical Engineering Study notes that a groundwater well is located within the southeast corner of the site and was measured to have groundwater at approximate depths of 7.5 feet, 14 feet, and 28 feet bgs in 1983, 2006, and 2015, respectively.

4.8.3 REGULATORY CONTEXT

A number of federal, State, and local policies provide the regulatory framework that guides the protection of water resources. The following discussion summarizes those laws that are most relevant to hydrology and water quality in the vicinity of the project site.

Federal Regulations

The following are the federal environmental laws and policies relevant to hydrology and water quality.

Federal Emergency Management Agency

FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers (USACE) studies. FEMA is also responsible for distributing the FIRMs, which are used in the NFIP. The FIRMs identify the locations of special flood hazard areas, including the 100-year floodplains.

FEMA allows non-residential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending upon the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). These standards are implemented at the State level through construction codes and local ordinances; however, these regulations only apply to residential and non-residential structure improvements. Although roadway construction or modification is not explicitly addressed in the FEMA regulations, the California Department of Transportation (Caltrans) has also adopted criteria and standards for roadway drainage systems and projects situated within designated floodplains. Standards that apply to floodplain issues are based on federal regulations (Title 23, Part 650 of the CFR). At the State level, roadway design must comply with drainage standards included in Chapters 800-890 of the Caltrans Highway Design Manual.

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6 Yolo Subbasin Groundwater Agency. *2022 Groundwater Sustainability Plan*. Adopted January 24, 2022.
7 California Department of Water Resources. *California's Critically Overdrafted Groundwater Basins.* January 2020.
8 Youngdahl Consulting Group, Inc. *Geotechnical Engineering Study for Shriners Property East Covell Boulevard Davis, California*. November 2024.

CFR Section 60.3(c)(10) restricts cumulative development from increasing the water surface elevation of the base flood by more than one foot within the floodplain.

Federal Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the U.S. Environmental Protection Agency (USEPA) must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two types of nonpoint source discharges are controlled by the NPDES program – nonpoint source discharge caused by general construction activities, and the general quality of stormwater in municipal stormwater systems. The 1987 amendments to the CWA directed the USEPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by USEPA that are not included in Phase I.

Section 402 of the CWA mandates that certain types of construction activities comply with the requirements of the NPDES stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than one acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB), implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs).

As of September 1, 2023, all dischargers with projects that include clearing, grading or stockpiling activities expected to disturb one or more acres of soil are required to obtain compliance under the NPDES Construction General Permit Order 2022-0057-DWQ. The General Permit requires all dischargers, where construction activity disturbs one or more acres, to take the following measures:

1. Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to include a site map(s) of existing and proposed building and roadway footprints, drainage patterns and stormwater collection and discharge points, and pre- and post- project topography;
2. Describe types and placement of Best Management Practices (BMPs) in the SWPPP that will be used to protect stormwater quality;
3. Provide a visual and chemical (if non-visible pollutants are expected) monitoring program for implementation upon BMP failure; and
4. Provide a sediment monitoring plan if the area discharges directly to a water body listed on the 303(d) list for sediment.

5. Develop and provide plans, calculations, and other supporting documentation for compliance with existing permitted Phase I or Phase II municipal separate storm sewer post-construction requirements or the post-construction standards of the General Permit.

To obtain coverage, a SWPPP must be submitted to the RWQCB electronically and a copy of the SWPPP must be submitted to the City of Davis. When project construction is completed, the landowner must file a Notice of Termination (NOT).

State Regulations

The following are the State environmental laws and policies relevant to hydrology and water quality.

State Water Resources Control Board

The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdictional boundaries of the Central Valley RWQCB (CVRWQCB) (Region 5). The CVRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their jurisdiction.

Central Valley Regional Water Quality Control Board

As authorized by the Porter-Cologne Water Quality Control Act, the CVRWQCB's primary function is to protect the quality of the waters within its jurisdiction for all beneficial uses. State law defines beneficial uses of California's waters that may be protected against quality degradation to include, but not be limited to, the following: domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

The CVRWQCB implements water quality protection measures by formulating and adopting water quality control plans (referred to as basin plans, as discussed below) for specific groundwater and surface water basins, and by prescribing and enforcing requirements on all agricultural, domestic, and industrial waste discharges. The CVRWQCB oversees many programs to support and provide benefit to water quality, including the following major programs: Agricultural Regulatory; Above-Ground Tanks; Basin Planning; CALFED; Confined Animal Facilities; Landfills and Mining; Non-Point Source; Spills, Leaks, Investigations, and Cleanups (SLIC); Stormwater; Total Maximum Daily Load (TMDL); Underground Storage Tanks (UST), Wastewater Discharges (including the NPDES); Water Quality Certification; and Watershed Management.

The CVRWQCB is responsible for issuing permits for a number of varying activities. Activities subject to the CVRWQCB permitting requirements include stormwater, wastewater, and industrial water discharge, disturbance of wetlands, and dewatering. Permits issued and/or enforced by the CVRWQCB include, but are not limited to, the NPDES Construction General Permit, NPDES Municipal Stormwater Permits, Industrial Stormwater General Permits, Clean Water Act Section 401 and 404 Permits, and Dewatering Permits.

Basin Plans and Water Quality Objectives

The Porter-Cologne Water Quality Control Act provides for the development and periodic review of water quality control plans (basin plans) that are prepared by the RWQCBs. Basin plans

designate beneficial uses of California's major rivers and groundwater basins, and establish narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a water body (i.e., the reasons why the water body is considered valuable), while water quality objectives represent the standards necessary to protect and support those beneficial uses. Basin plans are primarily implemented through the NPDES permitting system and by issuing waste discharge regulations to ensure that water quality objectives are met.

Basin plans provide the technical basis for determining waste discharge requirements and taking regulatory enforcement actions if deemed necessary. The project site is located within the jurisdiction of the CVRWQCB. The City of Davis is located within the plan area of the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (Basin Plan).[9]

The Basin Plan sets water quality objectives for the surface waters in its region for the following substances and parameters: bacteria, bioaccumulation, biostimulatory substances, color, dissolved oxygen, floating material, oil and grease, population and community ecology, pH, radioactivity, salinity, sediment, settleable material, suspended material, sulfide, taste and odor, temperature, toxicity, turbidity, and un-ionized ammonia. For groundwater, water quality objectives applicable to all groundwater have been set for bacteria, chemical constituents, radioactivity, taste, odors, and toxicity.

Senate Bill 5

In 2007, the State of California set the 200-year storm event as the Urban Level of Flood Protection (ULOP) for the State through a series of laws included in Senate Bill (SB) 5. Along with other related legislation, SB 5 established a mandate for local governments to amend their general plans and zoning codes to be consistent with State law on floodplain management. Specifically, SB 5 requires all cities and counties within the Sacramento-San Joaquin Valley, as defined in California Government Code Sections 65007(h) and (j), to make findings related to an ULOP or the national FEMA standard of flood protection before: (1) entering into a development agreement for any property that is located within a flood hazard zone; (2) approving a discretionary permit or other discretionary entitlement, or a ministerial permit that would result in the construction of a new residence, for a project that is located within a flood hazard zone; or (3) approving a tentative map, or a parcel map for which a tentative map was not required, for any subdivision that is located within a flood hazard zone. The primary purpose of the law is to ensure that appropriate flood protection is provided in urban and urbanizing areas.

A project would be subject to the requirements of SB 5 if the project meets the following criteria:

1. Located within an urban area that is a developed area, as defined by CFR Title 44, Section 59.1, with 10,000 residents or more, or an urbanizing area that is a developed area or an area outside a developed area that is planned or anticipated to have 10,000 residents or more within the next 10 years.
2. Located within a flood hazard zone that is mapped as either a special hazard area or an area of moderate hazard on FEMA's official (i.e., effective) FIRM for the NFIP.
3. Located within the Sacramento-San Joaquin Valley.

[9] Central Valley Regional Water Quality Control Board. *The Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin.* Revised February 2019.

4. Located within an area with a potential flood depth above 3.0 feet, from sources of flooding other than localized conditions that may occur anywhere in a community, such as localized rainfall, water from stormwater and drainage problems, and water from temporary water and wastewater distribution system failure.
5. Located within a watershed with a contributing area of more than 10 square miles.

The project site is located adjacent to the City of Davis, which has a population of 65,832 people. Therefore, because the project site is located adjacent to a developed area, the project would meet Criteria 1. With respect to Criteria 2, as shown in Figure 4.8-2, the northern portion of the site is located within Zone A, and is also located within the Sacramento Valley, consistent with Criteria 3. With respect to Criteria 4, portions of the site are located within an area with a potential flood depth, although the specific flood depth is unknown. Because the flood depth is unknown, the project is conservatively assumed to meet Criteria 4. Finally, consistent with Criteria 5, the site is located within the Covell Drain and East Davis watersheds, which have a contributing area of more than 10 square miles. Overall, because the proposed project would meet the above criteria, the requirements of SB 5 would apply and the project would be required to make findings related to flooding associated with the 200-year storm.

NPDES Small Municipal Separate Storm Sewer System (MS4) General Permit

The NPDES Municipal Stormwater Permitting Program regulates stormwater discharges from separate storm sewer systems. NPDES Municipal Stormwater Permits are issued in two phases. Phase I regulates stormwater discharges from large- and medium-sized municipal separate storm sewer systems (those serving more than 100,000 persons). Most Phase I permits are issued to a group of co-permittees encompassing an entire metropolitan area. Phase II provides coverage for smaller municipalities, including nontraditional small storm sewer systems, which include governmental facilities such as military bases, public campuses, and prison and hospital complexes. The NPDES Municipal Stormwater Permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP).

The CVRWQCB issued the NPDES General Permit No. CAS000004 Waste Discharge Requirements for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (Phase II MS4), which became effective on July 1, 2013. An “MS4” is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting or conveying stormwater; (ii) which is not a combined sewer; and (iii) which is not part of a Publicly Owned Treatment Works (POTW). The City of Davis is a Phase II MS4 permittee. New and Redevelopment Projects subject to the requirements of the Phase II MS4 NPDES permit must submit the appropriate Post-Construction Stormwater Plan based on the project type/development category. Regulated Projects include projects that create or replace 5,000 square feet (sf) or more of impervious surface. Regulated Projects that create and/or replace one or more acres of impervious surface are considered regulated hydromodification management projects. The proposed project would create more than one acre of impervious area, and, thus, is considered a Regulated Hydromodification Management Project subject to Phase II MS4 NPDES permit post-construction stormwater treatment requirements.

Regulated Projects are required to divide the project area into DMAs and implement and direct water to appropriately sized Site Design Measures (SDMs) and Baseline Hydromodification

Measures to each DMA to the MEP. Regulated Projects must additionally include Source Control BMPs where possible. SDMs and Baseline Hydromodification Measures include, but are not limited to:

- Rooftop and impervious area disconnection;
- Porous pavement;
- Rain barrels and cisterns;
- Vegetated swales;
- Bio-retention facilities;
- Green roofs; or
- Other equivalent measures.

A detailed description of the requirements for Regulated Hydromodification Management Projects, such as the proposed project, is included in the *Stormwater Phase II General Permit Development Standards Guidance Document.*[10]

Local Regulations

The following are the local environmental laws and policies relevant to hydrology and water quality.

City of Davis General Plan

The following policies from the City of Davis General Plan related to hydrology and water quality are applicable to the proposed project:

Water Chapter

Goal WATER 2 Ensure sufficient supply of high quality water for the Davis Planning Area.

Policy WATER 2.1 Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources.

Policy WATER 2.2 Manage groundwater resources so as to preserve both quantity and quality.

Policy WATER 2.3 Maintain surface water quality.

Goal WATER 3 Design stormwater drainage and detention facilities to maximize recreational, habitat and aesthetic benefits.

Policy WATER 3.1 Coordinate and integrate development of storm ponds and channels City-wide, to maximize recreational, habitat and aesthetic benefits.

Policy WATER 3.2 Coordinate and integrate design, construction, and operation of proposed stormwater retention and

[10] City of Davis. *Stormwater Phase II General Permit Development Standards Guidance Document*. November 2015.

detention facilities City-wide, to minimize flood damage potential and improve water quality.

Hazards Chapter

Goal HAZ 1 Provide flood protection which minimizes potential damage, while enhancing recreational opportunities and wildlife habitats and water quality.

Policy HAZ 1.1 Site and design developments to prevent flood damage.

Policy HAZ 1.2 Continue to provide flood control improvements that are sensitive to wildlife habitat and open space preservation.

City of Davis Municipal Code

City of Davis Municipal Code Chapter 30, Stormwater Management and Discharge Control, includes ordinances associated with hydrology and water quality. The applicable ordinances are discussed in further detail below.

Section 30.03.010

Section 30.03.010, Stormwater Discharges Associated with Construction Activity, requires compliance with the Construction General Permit. Additionally, an erosion and sediment control plan shall be prepared prior to and as a condition of the issuance of a grading or building permit. The erosion and sediment control plan shall contain, at a minimum, appropriate site-specific construction site BMPs and the rationale used for selecting or rejecting BMPs. Plan review by City Staff would ensure compliance; BMPs may be imposed as conditions of approval for a grading or building permit. A SWPPP developed pursuant to the Construction General Permit may substitute for the erosion and sediment control plan for projects where a SWPPP is developed.

Section 30.03.030

Section 30.03.030, New Development and Significant Redevelopment Projects subject to State of California NPDES Phase II Small Municipal Separate Storm Sewer System General Permit, states that all discretionary development and redevelopment projects are subject to the post-construction standards described in the NPDES General Permit for Phase II Small Municipal Separate Storm Sewer System (NPDES General Permit No. CASS000004).

Article 39.05

Article 39.05, Groundwater Wells, provides standards for the location, construction, maintenance, rehabilitation, sealing, abandonment and destruction of all wells so the quality of the groundwater is not polluted, contaminated or otherwise impacted in a manner which will jeopardize the health, safety or welfare of the citizens of the City.

4.8.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to hydrology and water quality. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if the proposed project would result in any of the following:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- 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:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    - 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 either during construction or in the post-construction condition; or
    - Impede or redirect flood flows;
- Place housing or improvements within a 100-year flood hazard area either as mapped on a federal Flood Hazard boundary or Flood Insurance Rate Map or other flood hazard delineation map which would:
    - Impede or redirect flood flows;
    - Expose people or structures to risk of loss, injury or death involving flooding; or
    - Risk release of pollutants due to project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The proposed project's potential impacts associated with erosion or siltation on- or off-site are discussed in Chapter 4.6, Geology and Soils, of this EIR. In addition, water supply availability is addressed in Chapter 4.14, Utilities and Service Systems, of this EIR.

Method of Analysis

The impact analysis for this chapter is based primarily on the Revised Preliminary Stormwater Control Plan prepared for the proposed project by Balance Hydrologics (see Appendix N) and Flood Protection Memorandum (see Appendix O) prepared by CBG. Both the Revised Preliminary Stormwater Control Plan and the Flood Protection Memorandum were peer reviewed by West Yost upon City request. The Flood Protection Memorandum tiers from the Revised Preliminary Stormwater Control Plan. Thus, the following discussion is focused on the methodology associated with only the Revised Stormwater Control Plan.

As discussed within the Revised Stormwater Control Plan, two model scenarios were developed to assess potential impacts related to hydrology and water quality:

- The pre-project scenario, which models the existing site conditions and establishes benchmark peak flow rates for the two-, 10-, 100-, and 200-year storm events.
- The post-project scenario, which represents construction of the proposed project and demonstrates the effects of the proposed stormwater facilities on retaining and infiltrating runoff for small storm events, as well as controlling peak flow rates for large storm events.

The two- and 10-year storm events were modeled using a 24-hour duration, while the 100- and 200-year storm events were run with a 24-hour duration and a 10-day duration. Peak flows from

the existing on-site conditions were compared to the combined peak flows following project construction to evaluate the effectiveness of peak flow control during project operation.

The DMAs were characterized in the model consistent with the Soil Conservation Service's (SCS) method for both pre- and post-project scenarios. The operational modeling for the post-project scenario focused on DMAs 1 and 2, which would contain the proposed development and impervious areas, while DMA 3 would be preserved as a self-treating area (see Figure 4.8-3).

Soil infiltration and other losses were accounted for using the Curve Number methodology. Curve numbers were assessed separately for each soil and land use type and were area-averaged to reach a composite value for each DMA under existing and operational conditions.

Percent impervious coverage was estimated based on land use values extracted from Table 12 of the 2009 Yolo County City/County Drainage Manual.

The proposed stormwater facilities were modeled in the Hydrologic Engineering Center Hydrologic Modeling System (HEC-HMS) by routing runoff from the developed DMAs to the proposed basins. The pump from the linked detention basins to the bioretention basin was modeled as having a capacity of 1,000 gallons per minute (gpm) with a "pump on" trigger at 25.65 feet, thereby reserving the lower 1.65 feet of the combined basins for infiltration. An additional high-flow release was modeled as a three-foot weir with a flowline elevation of 27.25 feet.

Detailed calculations are provided in the Revised Preliminary Stormwater Control Plan.

Project Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.8-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Construction of the proposed project would include grading, excavation, trenching for utilities, and other construction-related activities that could cause soil erosion at an accelerated rate during storm events. Such activities have the potential to affect water quality and contribute to localized violations of water quality standards if impacted stormwater runoff from construction activities enters Channel A in the project area, which eventually drains to the Willow Slough Bypass.

Soils exposed by the aforementioned types of construction activities have the potential to affect water quality in two ways: 1) suspended soil particles and sediments transported through runoff; or 2) sediments transported as dust that eventually reach local water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites also have the potential to enter runoff.

Figure 4.8-3
Post-Project Drainage Management Areas

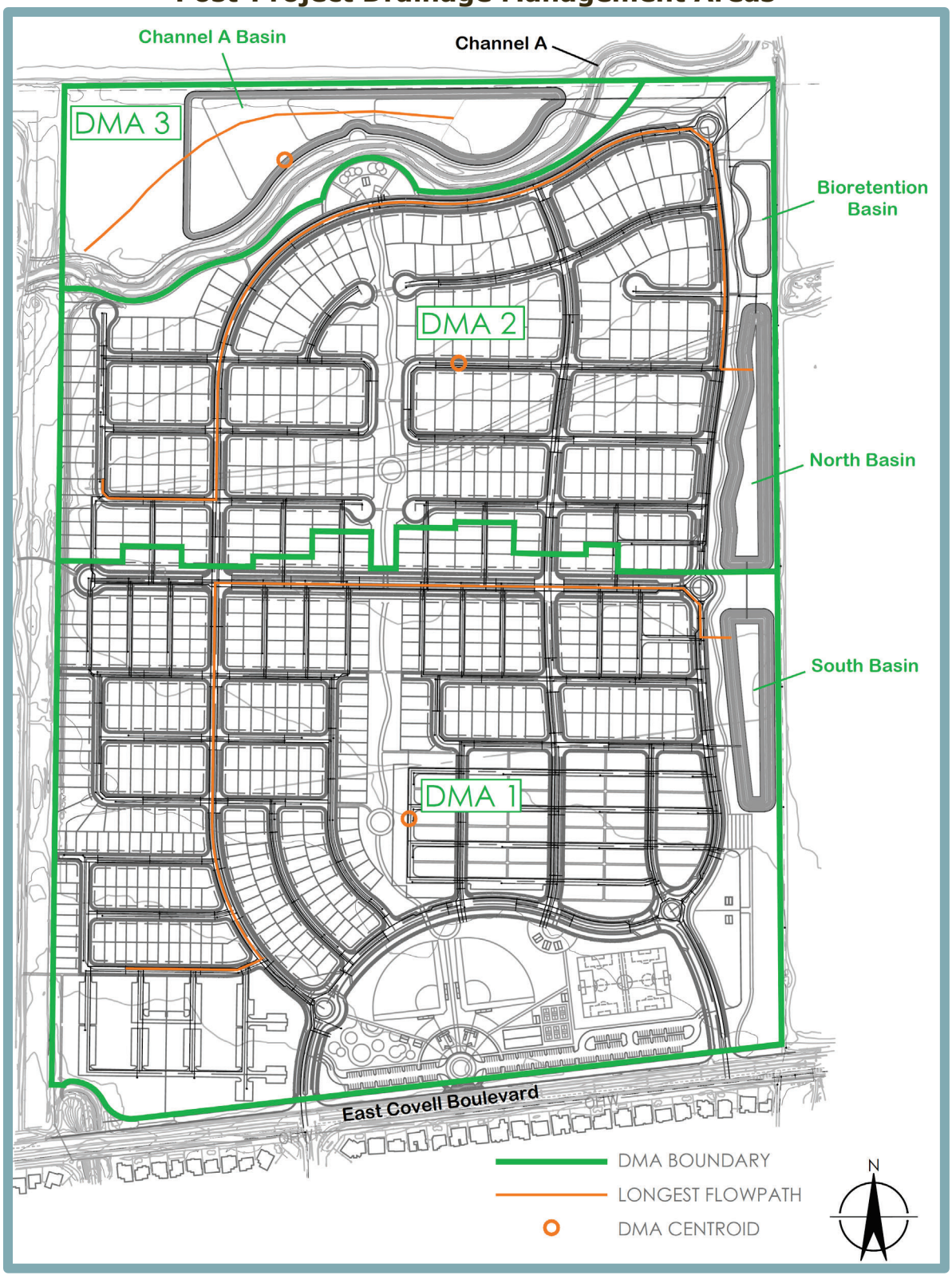


*Figure not OCR compatible.

Typical pollutants include, but are not limited to, petroleum and heavy metals from equipment and products such as paints, solvents, and cleaning agents, which could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff containing the sediment or contaminants should enter receiving waters in sufficient quantities. Discharge of polluted stormwater or non-stormwater runoff could violate waste discharge requirements. However, impacts from construction-related activities would generally be short-term and of limited duration.

NPDES permits are required for the discharge of pollutants to waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, dry stream beds, wetlands, and storm sewers. The RWQCB issues permits in lieu of direct issuance by the USEPA. The terms of the NPDES permits implement pertinent provisions of the CWA. Section 30.03.010 of the City's Municipal Code adopts by reference the standards of the State of California's NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity (NPDES General Permit No. CAS000002). Because the proposed project would require construction activities that would result in a land disturbance of greater than one acre, the project applicant would be required by the State to comply with the most current NPDES Construction General Permit requirements. Pursuant to the requirements, a SWPPP would be prepared for the proposed project, which would include the site map, drainage patterns and stormwater collection and discharge points, BMPs, and a monitoring and reporting framework for implementation of BMPs, as necessary. In addition, a Notice of Intent (NOI) would be filed with RWQCB.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The Construction General Permit prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges, and implementing good practices for vehicle and equipment maintenance, cleaning, and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include the following:

- Good housekeeping activities, such as storing of materials covered and elevated off the ground, in a central location;
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance;
- Providing a central location for concrete washout and performing routine maintenance;
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management; and
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

While the final materials management BMPs to be used during construction are currently unknown, the proposed project would likely include a combination of the BMP examples listed above. Final BMPs for project construction would be chosen in consultation with the applicable California Stormwater Quality Association (CASQA) Stormwater BMP Handbooks and implemented by the project contractor.

In accordance with the Construction General Permit, the project site would also be inspected during construction before and after storm events and every 24 hours during extended storm events in order to identify maintenance requirements for the implemented BMPs and to determine the effectiveness of the implemented BMPs. As a "living document," the site-specific SWPPP that would be prepared for the proposed project would be modified as construction activities progress. A Qualified SWPPP Practitioner (QSP) would ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The QSP would amend the SWPPP and revise project BMPs, as determined necessary through field inspections, to protect against substantial erosion or siltation on- or off-site.

Conclusion

Compliance with the State NPDES Construction General Permit would minimize the potential degradation of stormwater quality and downstream surface water associated with construction of the proposed project. In addition, BMPs would be required to be designed in accordance with the CASQA Stormwater BMP Handbook for New Development and Redevelopment. However, because a SWPPP has not yet been prepared for the proposed project, proper compliance with the aforementioned regulations cannot be ensured at this time, and the project's construction activities could violate water quality standards or waste discharge requirements or otherwise degrade water quality. Therefore, the proposed project could result in a ***significant*** impact related to short-term construction-related water quality.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.8-1 *Prior to commencement of construction, the applicant shall obtain a NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which pertains to pollution from grading and project construction. Compliance with the Permit requires the project applicant to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to ground disturbance. The SWPPP would incorporate Best Management Practices (BMPs) in order to prevent, or reduce to the greatest extent feasible, adverse impacts to water quality from erosion and sedimentation. A copy of the SWPPP including BMP implementation provisions shall be submitted to the City of Davis Public Works – Utilities and Operations Department.*

4.8-2 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Development of the proposed project would result in the conversion of an undeveloped area to a mixed-use community, including a total of 1,250 dwelling units, transit and on-site roadway improvements, neighborhood retail uses, a daycare facility, utility improvements, open space and greenbelts, and recreational uses, such as a community park, mini park, and a gym. Such new land uses could result in new stormwater pollutants being introduced to the project area. Pollutants associated with the project operation could include nutrients, oil and grease, metals, organics, pesticides, bacteria, sediment, trash, and other debris. Nutrients that could be present in post-construction stormwater include nitrogen and phosphorous resulting from fertilizers applied to landscaping. Excess nutrients could affect water quality by promoting excessive and/or a rapid growth of aquatic vegetation, which reduces water clarity and results in oxygen depletion. Pesticides, which are toxic to aquatic organisms and can bioaccumulate in larger species, such as birds and fish, can potentially enter stormwater after application to landscaped areas within the project site. Oil and grease could enter stormwater from vehicle leaks, traffic, and maintenance activities. Metals could enter stormwater as surfaces corrode, decay, or leach. Clippings associated with landscape maintenance and street litter could be carried into storm drainage systems. Pathogens (from pets, wildlife, and human activities) have the potential to affect downstream water quality.

Development of the proposed project could also increase polluted non-stormwater runoff (e.g., car wash water, other wash water, and landscape irrigation runoff). Such non-stormwater runoff could flow down sidewalks, parking areas, and streets, and pick up additional pollutants deposited on impervious surfaces prior to discharge into the storm drain system and surface waters. Discharge of polluted stormwater or non-stormwater runoff could violate waste discharge requirements.

Phase II MS4 Permit Requirements

As discussed previously, the project site is located within the permit area covered by the City of Davis's MS4 Permit (NPDES General Permit No. CAS000004, Order No. 2013-0001-DWQ), pursuant to the NPDES Phase II program. Project-related stormwater discharges are subject to all applicable requirements of said permit. Specifically, as noted above, regulated projects are required to divide the project area into DMAs and implement and direct water to appropriately sized SDMs and Baseline Hydromodification Measures to each DMA. The proposed DMAs for the project site are shown in Figure 4.8-3. DMAs 1 and 2 would drain to the proposed detention basins along the eastern project site boundary, while DMA 3 contains the self-treating area north of the on-site portion of Channel A. Source control measures within all three on-site DMAs must be designed for pollutant-generating activities or sources consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment, or equivalent manual, and must be shown on the improvement plans.

The Revised Preliminary Stormwater Control Plan prepared for the proposed project includes a list of recommended permanent and operational source control BMPs to address potential sources of runoff pollutants. Such BMPs include, but are not limited to, preventing runoff from trash enclosures or similar facilities from discharging into the storm drain system and inspecting such facilities regularly; ensuring swimming pools, spas, fountains, fire sprinklers, and interior floor drains/boiler lines are connected to the proposed sanitary sewer system; designing landscaping to minimize irrigation and runoff, as well as to promote surface infiltration; marking on-site storm drain inlets and prohibiting dumping; and minimizing the use of fertilizers and pesticides. Implementation of the recommended source control BMPs would reduce the potential for urban pollutants to enter and potentially degrade local water quality.

Additional details related to hydromodification management requirements associated with the Phase II MS4 permit are discussed under Impact 4.8-4 below.

Proposed Storm Drain System

The City of Davis requires all development projects to comply with the Stormwater Phase II General Permit Development Standards Guidance Document.[11] The proposed project would create approximately 134.5 acres of impervious surface and would therefore qualify as a regulated project under Section 5 of the City's design standards. Low-impact development (LID) measures would be integrated throughout the project site to provide stormwater quality treatment. LID components refer to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat. The LID measures may include both volume-based BMPs (e.g., bioretention, infiltration features, pervious pavement, etc.) and flow-based BMPs (e.g., vegetated swales, stormwater planter, etc.). The use of the features would be dependent upon location and setting within the project. The BMPs would be designed in accordance with the stormwater quality control standards established by Davis Municipal Code Article 30.03 and the CASQA – California Stormwater BMP Handbook.

As shown in Figure 4.8-3, stormwater drainage from the site would be collected in the two linked detention basins along the eastern project site boundary. A bioretention basin is also located north of the linked detention basins and would receive stored runoff for treatment. The bioretention basin would also provide additional infiltration capacity. Following treatment, treated on-site runoff that does not infiltrate the basins would be discharged to Channel A. The primary on-site storm water features that would address both water quality and peak flow attenuation of runoff are the proposed detention basins. The proposed project would also include a self-treatment area within the northern portion of the project site, adjacent to Channel A. The foregoing stormwater drainage features are discussed further in Impact 4.8-4 below.

Maintenance and Inspection

In order to ensure continued operation of the proposed LID control features, there would be regular inspection and maintenance of such features. For example, plants

[11] City of Davis. *City of Davis Stormwater Phase II General Permit Design Standard Guidance Document*. November 2015.

and vegetation within the detention basins would be inspected monthly, and the basins would be inspected for the presence of standing water 72 hours after rain events. Maintenance activity would include, but not necessarily be limited to, removal of debris from basins and removal of debris from outlets of basins. In addition, any method of trash capture would require frequent monitoring and cleaning to keep the drainage system fully operational.

Conclusion

Based on the above, the proposed project would include site design measures to ensure that stormwater runoff is properly treated prior to discharge to Channel A. Thus, urban pollutants entering and potentially degrading local water quality would not be expected to occur as a result of the proposed project. However, because a final Stormwater Control Plan has not been prepared, ongoing maintenance of the proposed stormwater treatment system and incorporation of proper source control measures cannot be ensured at this time. Thus, project operation could violate water quality standards or waste discharge requirements or otherwise degrade water quality, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.8-2 *Prior to approval of final project improvement plans or grading plans, a final Stormwater Control Plan shall be submitted to City of Davis Public Works – Utilities and Operations Department for review and approval. The final Stormwater Control Plan shall be in compliance with all applicable provisions of the National Pollutant Discharge Elimination System (NPDES) Phase II MS4 General Permit (NPDES General Permit No. CAS000004, Order No. 2013-0001-DWQ) and shall meet the standards of the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and Redevelopment. Site design measures, source control measures, hydromodification management, and Low Impact Development (LID) standards, as necessary, shall be incorporated into the design and shown on the improvement plans. The final plans shall include calculations demonstrating that the water quality BMPs are appropriately sized, using methodology in the CASQA Stormwater BMP Handbook for New Development and Redevelopment. The final plans shall also incorporate the proposed components for maintaining the stormwater treatment facilities.*

4.8-3 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Based on the analysis below, the impact is ***less than significant*****.**

The proposed project would result in approximately 134.5 acres of new on-site impervious surfaces, which would reduce the infiltration of groundwater as compared to existing conditions. Groundwater relies on annual rainfall and percolation through pervious soils to recharge the system. As discussed in the Existing Environmental Setting section above, however, soils throughout the eastern portion of Yolo County have very slow infiltration rates with high runoff potential during storm events. Thus, the project site would not be considered an area of substantial contribution to groundwater recharge in the region. Given the limited recharge potential of the portions of the site that would be developed with impervious surfaces, the proposed project would not interfere substantially with groundwater recharge. Furthermore, the proposed project would include new stormwater detention basins located along the eastern project site boundary and a self-treatment area along the northern project site boundary. The detention basins and self-treatment area would allow partial infiltration of runoff into on-site soils.

In addition, while the City pumps groundwater supplies from the Yolo Subbasin, the groundwater subbasin is not currently in a state of overdraft. In addition, as further discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, the City's projected available annual potable surface water supplies would be sufficient to meet the demands of the City's existing water service plus the proposed project.

Because the project site is not considered an important groundwater recharge area and the proposed project would not involve increased demand on groundwater supplies within an area in a state of overdraft, the proposed project would not create a conflict with, or impede the implementation of, a sustainable groundwater plan. Thus, impacts related to groundwater would be ***less than significant***.

Mitigation Measure(s)

None required.

4.8-4 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or 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. Based on the analysis below, and with implementation of mitigation, the impact is *less than significant*.

The potential for the proposed project to result in substantial additional sources of polluted runoff, including erosion, is addressed under Impacts 4.8-1 and 4.8-2 above. Further discussion regarding erosion is provided in Chapter 4.6, Geology and Soils, of this EIR.

Existing impervious surfaces are not located within the project site, which is currently used for agricultural activities. Therefore, development of the proposed project would result in an approximately 134.5-acre increase in impervious surfaces on-site related to roofs, driveways, and roadways. Increases to peak runoff rates resulting from alterations to the existing drainage pattern of the site have the potential to result in exceedance of existing or planned stormwater drainage systems or flooding on- or off-site.

As discussed previously, the site would be divided into three DMAs (see Figure 4.8-3). According to the Revised Preliminary Stormwater Control Plan, the proposed project would result in a total of 67 percent new impervious surfaces within DMA 1, 59 percent new impervious surfaces within DMA 2, and 12 percent new impervious surfaces within DMA 3. Overall, the proposed surface improvements would result in impervious ground cover ranging from two percent impervious surfaces within greenbelt areas and Urban Agricultural Transition Area (UATA) within the northern and eastern portions of the project site, to 80 percent impervious surfaces within residential areas.

Within DMAs 1 and 2, which encompass the areas of the site proposed for development, stormwater runoff would be directed to gravity-flow storm drainpipes, ranging between 18 and 60 inches, located within the proposed internal roadway network. The storm drains within each DMA would then convey runoff to the two detention basins along the eastern project site boundary, within the UATA. The two detention basins would be interconnected by a large “equalizer” pipe and function as one combined stormwater drainage facility. The two detention basins would temporarily detain runoff from storms to later be pumped to the bioretention basin and then released to Channel A, as well as detain runoff for infiltration.

Stored runoff in the linked detention basins above a pre-determined elevation would be pumped to the bioretention basin located north of the detention basins. According to the Revised Preliminary Stormwater Control Plan, the bioretention basin would follow standard local design guidelines and feature two feet of specially formulated biosoil over a three-foot underlying rock storage layer, which would provide storage for additional infiltration. Any runoff in the bioretention basin that exceeds the infiltration capacity would be routed through an underdrain system to be discharged through a gravity outflow to Channel A. The underdrain would be provided at the top of the rock layer. According to the Revised Preliminary Stormwater Control Plan, because large storms could generate more runoff than needs to be treated for water quality objectives, the northernmost detention basin would also have a gravity outflow connected directly to Channel A. Although many configurations are possible for the outflow structure, the Revised Preliminary Stormwater Control Plan assumed the gravity flow outlets as having a seven-foot-wide by one-foot-high lower outlet orifice with a flowline elevation of 26.5 feet and an overflow weir with a crest elevation of 31.0 feet.

In addition, the proposed project would include a self-treatment area within the northern portion of the project site, contained entirely within DMA 3 and located north of Channel A. The only impervious surfaces within DMA 3 would consist of multi-use

paths. As such, the Revised Preliminary Stormwater Control Plan concluded that significant water-quality or peak flow concerns associated with DMA 3 would not occur.

Peak Flows and Volumes

Pursuant to the City's Phase II MS4 permit, hydromodification management projects, such as the proposed project, are required to demonstrate hydromodification management of stormwater such that post-project runoff is maintained at equal or below pre-project flow rates, generally by way of infiltration, rooftop, and impervious area disconnection, bioretention, or other LID measures that result in post-project flows that mimic pre-project conditions.

To assess the changes in runoff volumes from the project site that could occur due to the proposed project, Balance Hydrologics calculated the pre- and post-construction peak flow volumes during various storm events. Pre- and post-project peak flows are presented in Table 4.8-1.

Table 4.8-1
Peak Flow Characteristics: Pre- and Post-Project Peak Flows (cfs)

Storm Event	Pre-Construction Peak Flow	Post-Construction Peak Flow
2-year, 24-hour	12.5	3.9
10-year, 24-hour	37.6	13.0
100-year, 24-hour	131.1	70.3
200-year, 24-hour	146.2	77.2
100-year, 10-day	124.6	84.6
200-year, 10-day	137.1	99.0

Note: cfs = cubic feet per second

Source: Balance Hydrologics, June 2025.

Pursuant to the City's hydromodification management requirements, post-project peak flows from the 2-year, 24-hour storm must be reduced to below existing conditions. As shown in Table 4.8-1, post-project peak flows are lower than pre-project peak flows for all modeled storm events. Therefore, peak discharge from the project site would not exceed existing conditions because the proposed project would include development of on-site detention capable of handling the on-site peak flow volumes.

The Preliminary Stormwater Control Plan also included calculations to assess the changes in runoff volumes from the project site that could occur due to the proposed project. Table 4.8-2 presents a comparison of the peak discharge volumes associated with existing site drainage conditions and buildout of the proposed project, as well as the associated detention basin water surface elevation (WSE).

As shown in Table 4.8-2, the largest increase in total volume of runoff occurs during the 200-year, 10-day storm, with a total increase in volume of runoff of 19.2 acre-feet. According to the Flood Protection Memorandum, the proposed project would include additional volumetric storage on-site to accommodate the increase in post-development runoff volume. Extra storage has been built into the project through the

oversizing of the detention basins and the inclusion of the self-treatment area north of Channel A. According to the Flood Protection Memorandum, the two detention basins along the eastern project site boundary have been sized to provide a combined 44.5 acre-feet of storage during the 200-year storm event.

Table 4.8-2
Peak Volume Characteristics: Pre- and Post-Project Volumes (acre-feet)

Storm Event	Pre-Construction Volume	Post-Construction Volume	Detention Basin WSE	Freeboard (feet)
2-year, 24-hour	8.0	14.4	25.2	7.8
10-year, 24-hour	19.6	27.2	27.1	5.9
100-year, 24-hour	62.2	70.0	30.1	2.9
200-year, 24-hour	69.5	77.6	30.7	2.3
100-year, 10-day	173.7	192.4	31.1	1.9
200-year, 10-day	193.4	212.6	31.5	1.5

Source: Balance Hydrologics, June 2025.

In addition, the water treatment area within DMA 3 in the northern portion of the project site would function as an overflow basin. Pursuant to FEMA FIRM panels, the 100-year WSE at Willow Slough at the confluence of Yolo Bypass is 29.5 feet (halfway between Yolo Bypass BFE of 30 and 29 feet) (see Exhibit C of Appendix O). Therefore, the Flood Protection Memorandum assumed that Channel A would backwater flood from Willow Slough at a BFE of 29.5 feet. The proposed overflow basin would provide 21.5 acre-feet of new storage below the 100-year WSE, which would be more than sufficient to accommodate the 19.2 acre-feet of increased volumetric flow created by project construction. Therefore, the project site's proposed basins would detain the collected stormwater during the peak storm events such that drainage would not be released until sufficient downstream capacity exists. Overall, the volume of flow being discharged from the project site would be reduced to less than existing conditions.

Conclusion

Based on the above, the proposed stormwater drainage system could accommodate the anticipated increases in peak flow and peak volumes relative to existing conditions. Nevertheless, a final drainage report would be required with project improvement plans to substantiate the preliminary drainage design. Overall, the proposed project would substantially alter the drainage pattern of the site, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

4.8-4 *As part of the improvement plan submittal process, the Revised Preliminary Stormwater Control Plan prepared for the proposed project shall be submitted to the City of Davis Public Works – Utilities and Operations Department in final format. The final report may require more detail than that provided in the preliminary report, and shall be*

reviewed in concert with the improvement plans to confirm conformity between the two. The report shall be prepared by a Registered Civil Engineer and shall, at a minimum, include: a written text addressing existing conditions, the effects of the proposed improvements, all appropriate calculations, watershed maps, changes in flows and patterns, and proposed on- and off-site improvements and drainage easements to accommodate flows from this project. The report shall identify water quality protection features and methods to be used during construction, as well as long-term post-construction water quality measures. The final report and associated design-level recommendations provided in the drainage report shall be included in the improvements plans prior to their approval by the City of Davis Public Works – Utilities and Operations Department.

4.8-5 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 impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation. Based on the analysis below, and with implementation of mitigation, the impact is *less than significant*.

The project site is located approximately 71.50 miles from the coast and is not located near any lakes. Therefore, the proposed project would not be subject to potential impacts related to tsunamis or seiches and the following analysis relates to flood hazard zones only.

As discussed in the Regulatory Context section of this chapter, the proposed project is conservatively assumed to meet all five SB 5 criteria and, thus, would be subject to SB 5 and the requirements of the ULOP. SB 5 requires the project to make findings related to flooding associated with the 200-year storm. Potential impacts related to such are discussed in Impact 4.8-4 above; as discussed therein, extra storage has been built into the project through the oversizing of the detention basins and the inclusion of the self-treatment area to provide sufficient storage for the 200-year storm event.

As shown in Figure 4.8-2, the northeastern portion of the project site includes an area designated by FEMA as Zone A, which is defined as an area determined to flood during the one percent annual flood event. However, according to the Revised Preliminary Stormwater Control Plan and as discussed above, the flooding source is anticipated to be backwater flooding from the Yolo Bypass through Willow Slough, not from Channel A. Due to the off-site nature of the regional flooding source, the Revised Preliminary Stormwater Control Plan concluded that the portion of the project site within the mapped floodplain could be elevated above BFEs if due consideration was given to overall floodplain storage. As discussed under Impact 4.8-4, project design includes the oversizing of the proposed basins and the provision of additional storage to ensure flooding on- or off-site would not occur and the capacity of existing drainage

systems would not be exceeded as a result of the project, including the raising of the portion of the site above BFEs. In addition, the City of Davis Design Standards require that development areas elevate pads for structures one foot above the applicable BFE for the area.

Furthermore, all of the improvements associated with the proposed project would be subject to Article 8.03 of the City of Davis Code, which is intended to minimize public and private losses due to flood conditions. The Flood Prevention Standards provide methods for reducing flood losses.

With respect to risking release of pollutants due to project inundation, residential projects do not involve the storage of large amounts of pollutants, and all stormwater exiting the project site would be directed to on-site stormwater quality features to ensure that any pollutants entrained within stormwater from the project site are removed prior to discharge.

Based on the above, the proposed project is not anticipated to result in the impediment or redirection of flood flows such that on- or off-site structures would be exposed to flood risk. However, a Conditional Letter of Map Revision (CLOMR) would be required prior to improvement plan approval to ensure the project's compliance with existing regulations. Therefore, without a CLOMR submitted to FEMA, a ***significant*** impact could occur related to alteration of the existing drainage pattern of the site or area, including through alteration of a course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level by ensuring that the project complies with all regulations needed to ensure that new impervious surfaces created by the project do not impede or redirect flood flows.

4.8-5 *Prior to improvement plan approval, and if required by the Federal Emergency Management Agency (FEMA), the Yolo County Flood Control and Water Conservation District, or the City Floodplain Administrator, the applicant shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR). A copy of the letter shall be provided to the City of Davis Public Works Engineering and Transportation Department. A Letter of Map Revision (LOMR) from FEMA shall be provided to the City of Davis Public Works Engineering and Transportation Department prior to acceptance of project improvements as complete.*

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. For

further detail related to the cumulative setting of the project, refer to Chapter 6, Statutorily Required Sections of this EIR. The cumulative setting for impacts related to hydrology and water quality encompasses the Covell Drain and East Davis watersheds.

4.8-6 Cumulative impacts related to the violation of water quality standards or waste discharge requirements, groundwater quality, management, and recharge, and impacts resulting from the alteration of existing drainage patterns. Based on the analysis below, the project's incremental contribution to this significant cumulative impact is *less than cumulatively considerable*.

Potentially cumulative impacts related to stormwater quality, groundwater, and drainage patterns are discussed separately below.

Stormwater Quality

Construction activities have the potential to affect water quality and contribute to localized violations of water quality standards if stormwater runoff from construction activities enters receiving waters. Runoff from additional construction sites within the project area could carry sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products, which could result in water quality degradation if runoff containing such sediment or contaminants should enter receiving waters in sufficient quantities. Thus, construction activities associated with the proposed project, in combination with construction activities associated with other reasonably foreseeable projects in the Covell Drain and East Davis watersheds, could result in cumulative impacts related to water quality. However, all construction projects resulting in disturbance of more than one acre of land are required to comply with the most current NPDES Construction General Permit Order requirements. Conformance with the NPDES Construction General Permit would require preparation of SWPPPs for all such projects, and subsequent implementation of BMPs to prevent the discharge of pollutants. Considering the existing permitting requirements for construction activity in the project area, cumulative construction within the Covell Drain watershed would be heavily regulated and impacts related to the degradation of water quality would be minimized to the extent feasible.

Similar to the proposed project, cumulative development within the City of Davis would be subject to Phase II MS4 stormwater requirements, including source control and treatment control features. Specifically, regulated projects are required to divide the project area into DMAs and implement and direct water to appropriately sized SDMs and Baseline Hydromodification Measures to each DMA. Source control measures must be designed for pollutant-generating activities or sources consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment, or equivalent manual, and must be shown on improvement plans.

Based on the conceptual stormwater design, during operations, the stormwater runoff would be properly treated prior to discharge from the site. Thus, urban pollutants

entering and potentially polluting the local drainage system would not be expected to occur as a result of the proposed project. A final stormwater control plan would be required with submittal of the improvement plans for City review and approval to substantiate the preliminary report's LID sizing calculations. In addition, pursuant to Phase II MS4 requirements, a Post Construction Stormwater Control Plan would be required for the proposed project. The proposed project would also be subject to NPDES Construction General Permit requirements, including implementation of BMPs and preparation of a site-specific SWPPP. Cumulative development projects within the project area would also be subject to Phase II MS4 stormwater requirements, as well as all City requirements related to stormwater treatment and control. Compliance with the foregoing regulations would ensure that impacts related to the alteration of drainage patterns, the discharge of pollutants, and flooding are minimized to the extent feasible.

Groundwater

Cumulative development within the project region would result in increased amounts of impervious surfaces, which would reduce the infiltration of groundwater within the project region. Although cumulative development would increase the amount of impervious surfaces in the project region, stormwater would continue to be discharged to Channel A, and other local waterways, where stormwater could partially infiltrate into the soil and recharge groundwater. Furthermore, the project site itself is not considered a site of substantial groundwater recharge; thus, development of the proposed project would not result in a significant cumulative loss of groundwater recharge.

Groundwater in the project region is managed on a subbasin level. The Yolo Subbasin, within which the project is located, is not in a state of overdraft, and the Yolo Subbasin Groundwater Sustainability Plan (GSP) will continue to manage groundwater in the region.

Because groundwater is managed on a subbasin level, and the proposed project would not result in a substantial site-specific loss of groundwater recharge, the proposed project, in combination with cumulative development within the region, would not result in a significant cumulative impact to groundwater recharge.

Cumulative Flows and Volumetrics

As discussed, the treated stormwater runoff from the project site would be routed to Channel A. Two other reasonably foreseeable cumulative projects would discharge treated runoff to Channel A: the Palomino Place and Village Farms Davis projects. A Cumulative Storm Drainage Impacts Memorandum was prepared by Cunningham Engineering to evaluate the cumulative hydrologic impacts downstream of the Village Farms Davis Project.[12] Specifically, Cunningham Engineering assessed the volumetric impact on East Davis Ponding, located downstream of the Village Farms Davis Project, Palomino Place, and the project site.

[12] Cunningham Engineering. *Village Farms Davis – Cumulative Storm Drainage Impacts Memorandum*. November 27, 2024.

The project site was evaluated under the former version of the project, the Shriners Property Project; as such, the Memorandum included a review of the then-current Preliminary Stormwater Control Plan prepared for the project site. In addition, the Cumulative Storm Drainage Impacts Memorandum excluded preserved areas of the Village Farms Davis Project from the net development area. Similarly, because the proposed project would include 44.3 acres of preserved acreage within the UATA, the net acreage associated with the project site would be 188.1 acres (232.4 – 44.3 = 188.1). Because the Memorandum anticipated 209.6 acres of development area associated with the Shriners Property Project, the analysis therein represents a conservative analysis as compared to the currently proposed project.

Using available data from the drainage study prepared for the Village Farms Davis Project, Cunningham Engineering qualitatively compared the peak stage effects from the Village Farms Davis project and extrapolated an equivalent impact resulting from the Palomino Place and the Shriners Property projects using computations. The results are shown in Table 4.8-3, which illustrate that the cumulative development of the foregoing projects is anticipated to result in approximately 0.036-foot (less than half an inch) of increase to water surface elevations within the East Davis ponding area in the 200-year, 10-day storm event. Such ponding is only a slight increase over the East Davis Ponding increase estimates attributable to the proposed project alone (0.01424 feet), and would not be anticipated to represent a significant contribution to a cumulative impact.

Table 4.8-3
Cumulative 200-Year, 10-Day Peak Stage
East Davis Ponding

Shriners Property	Village Farms Davis	Palomino Place	Total Cumulative Net Impact to East Davis Pond Storage
0.01424 feet	0.02 feet	0.00192 feet	0.03616 feet

Source: Cunningham Engineering, 2024.

Similar to the proposed project, additional cumulative development that could occur within the Covell Drain and East Davis watersheds would be subject to the applicable provisions of the City's NPDES Phase II MS4 general permit. Regulated projects are required to divide the project area into DMAs and implement and direct water to appropriately sized DMAs and Baseline Hydromodification Measures within each DMA. Source-control measures must be designed for pollutant-generating activities or sources consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment, or equivalent manual, and must be shown on the improvement plans. In addition, new storm drain infrastructure would be required to be designed consistent with applicable standards set forth by the City of Davis Public Works Revised Design Standards, ensuring that new drainage features limit the potential for on- or off-site site flooding to occur. Overall, based on compliance with the foregoing regulations and the cumulative impact to the peak stage water surface elevations within the East Davis ponding area, cumulative development within the watershed would not substantially alter the existing drainage pattern of the area in a manner which would result in substantial adverse effects, and a less-than-significant impact would occur.

Conclusion

As discussed throughout this chapter, development of the proposed project would include LIDs and BMPs to minimize the potential for the project to result in impacts related to hydrology and water quality. Moreover, project development would not result in a significant incremental contribution to cumulative impacts related to peak flows or flooding due to changes in drainage patterns at the project site. Given the analysis presented in this chapter, the conclusions reached by Cunningham Engineering, and the highly regulated nature of cumulative development in the project region, the project's incremental contribution to the significant cumulative impact would be ***less than cumulatively considerable***.

Mitigation Measure(s)

None required.

4.9. Land Use and Planning

4.9 LAND USE AND PLANNING

4.9.1 INTRODUCTION

The purpose of the Land Use and Planning chapter is to examine the proposed project's compatibility with existing and planned land uses in the area and to assess any inconsistency with applicable planning documents. This chapter includes a description of the existing land use setting of the project site and the adjacent area, including the identification of existing land uses and current Davis General Plan policies and zoning designations. The information contained in this analysis is primarily based on the City of Davis General Plan[1] and City of Davis General Plan EIR,[2] as well as the Davis Municipal Code.

In addition, the reader is referred to the various environmental resource evaluations presented in the other technical chapters of this EIR for a discussion of potential physical/environmental effects that may result from land use changes.

4.9.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing land uses on the project site, at the time the Notice of Preparation (NOP) was published on July 12, 2024, as well as the existing plans and policies that guide the development of the project site.

Project Site Characteristics

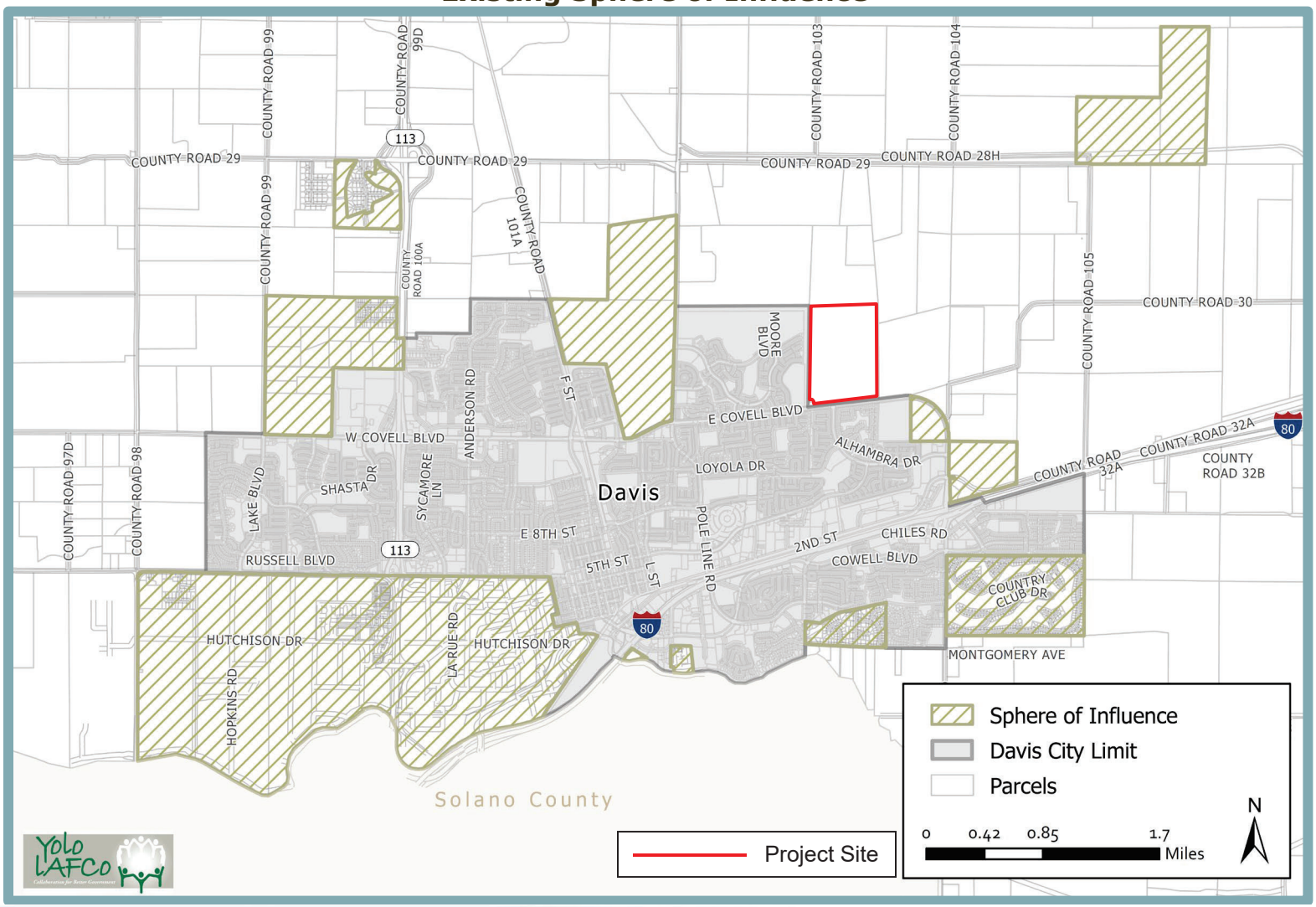
The approximately 232-acre project site, identified by Assessor's Parcel Number (APN) 071-130-007, is located north of East Covell Boulevard and east of the Wildhorse Agricultural Buffer in a currently unincorporated portion of Yolo County, California. As shown in Figure 4.9-1, the project site is located outside of the City's Sphere of Influence (SOI).

The project site consists of generally flat land currently used for agricultural activities, including the planting of row crops. Agricultural-related uses (i.e., dirt roadways, graded surfaces, and agricultural structures) provide access to recently planted fields located within the surrounding area. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site. Channel A runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately 5 to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

An existing road crossing the northwestern portion of the project site allows agricultural operations to continue from Channel A to the northern boundary of the project site. In addition, a City-owned public trail easement is located northeast of the project site and an existing grade-separated crossing for bicyclists and pedestrians is located southwest of the site.

[1] City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
[2] City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.

Figure 4.9-1
Existing Sphere of Influence



Surrounding Land Uses

The project site is bounded by East Covell Boulevard to the south; the 135-foot-wide Wildhorse Agricultural Buffer to the west; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south, across East Covell Boulevard.

Existing General Plan Land Use Designations

The approximately 232-acre project site is located within unincorporated Yolo County, and as a result, the proposed project includes a request to amend the SOI and annex the site into the City of Davis. The applicable General Plan land use designations are discussed in the following section.

Yolo County General Plan

The project site is designated by Yolo County as Agricultural (AG).

Agriculture

The AG designation includes the full range of cultivated agriculture, such as row crops, orchards, vineyards, dryland farming, livestock grazing, forest products, horticulture, floriculture, apiaries, confined animal facilities and equestrian facilities. In addition, AG land use designation includes agricultural industrial uses (e.g. agricultural research, processing and storage; supply; service; crop dusting; agricultural chemical and equipment sales; surface mining; etc.) as well as agricultural commercial uses (e.g. roadside stands, "Yolo Stores," wineries, farm-based tourism (e.g. u-pick, dude ranches, lodging), horseshows, rodeos, crop-based seasonal events, ancillary restaurants and/or stores serving rural areas. The AG designation also includes farmworker housing, surface mining, and incidental habitat.

Existing Zoning

Corresponding with the project site's current Yolo County land use designation, the site is zoned by Yolo County as Agricultural, specifically, Agricultural Intensive (A-N).

Agricultural Intensive

The A-N zone is applied to preserve lands best suited for intensive agricultural uses typically dependent on higher quality soils, water availability, and relatively flat topography. The purpose of the zone is to promote those uses, while preventing the encroachment of nonagricultural uses. Uses in the A-N zone are primarily limited to intensive agricultural production and other activities compatible with agricultural uses, including agriculturally related support uses, excluding incompatible uses, and protecting the viability of the family farm. Minimum lot size for new parcels in the A-N zone is 40 acres for irrigated parcels primarily planted with permanent crops, such as orchards or vineyards; 80 acres for irrigated parcels that are cultivated; and 160 acres for parcels that are generally uncultivated and/or not irrigated.

Surrounding Land Use and Zoning Designations

The existing General Plan land use and zoning designations of each of the surrounding areas is summarized in Table 4.9-1 below. Each of the General Plan land use and zoning designations are described in the following sections. The area to the north and east of the project site are located within unincorporated Yolo County.

City of Davis General Plan Land Use Categories

The City's General Plan defines the land use designations within Table 4.9-1 as detailed below.

Table 4.9-1
Summary of Adjacent Land Use and Zoning Designations

Relationship to Site	Existing Use	General Plan Land Use Designation(s)	Zoning Designation(s)
North	Agricultural	AG (Yolo County)	A-N (Yolo County)
South	Single-Family Residential	Residential (Low and Medium Density) Parks/Recreation Neighborhood Greenbelt	Planned Development (P-D) (4-88, 9-91, 2-07B)
	Harper Junior High	Public/Semi-Public	P-SP
West	Wildhorse Agricultural Buffer	Urban Agricultural Transitional Area (UATA)	P-D 3-89
	Wildhorse neighborhood	Residential (Low and Medium Density) Parks/Recreation Neighborhood Greenbelt	P-D 3-89
East	Agricultural	AG (Yolo County)	A-N (Yolo County)

Neighborhood Greenbelt

The Neighborhood Greenbelt land use designation is intended to provide safe and secure linear parkways and connectors close to residences as alternatives to biking or walking on streets. Neighborhood greenbelts connect to UATAs, green-streets, parks, other open space network elements, activity centers, and public facilities.

Residential

The Residential land use categories presented in the City's General Plan are intended to allow for residential development emphasizing compact clustered development in new areas and infill in existing neighborhoods, together with a mixture of local-serving retail and institutional uses, to meet housing demands, reduce pressure for peripheral growth and facilitate transit and bicycle/pedestrian travel. Allowable uses for the Residential land use designations include a mix of all types of housing, including single-family, mobile homes, split lots, and multi-family units.

Low Density Residential

Allowable densities for the Low Density Residential category range from 3.00 to 5.99 units per gross acre, accounting for a 25 percent density bonus. Without a density bonus, allowable densities range from 2.40 to 4.79 units per gross acre.

Medium Density Residential

Allowable densities for the Medium Density Residential category range from 6.00 to 13.99 units per gross acre, accounting for a 25 percent density bonus. Without a density bonus, allowable densities range from 4.80 to 11.20 units per gross acre.

Public/Semi-Public
The Public/Semi-Public land use designation is intended to provide appropriate, centrally-located sites for community facilities, including offices, schools, childcare facilities, hospitals and accessory medical offices, religious institutions, and drainage facilities and utilities.

Parks/Recreation
The intent of the Parks/Recreation land use designation is to offer a full range of park amenities to City residents. Allowable uses for the Parks/Recreation land use designation include neighborhood, community, and regional parks, as well as outdoor recreational facilities within urban development, such as golf courses. Specific uses include, but are not limited to, baseball fields, tot lots and play apparatus, soccer fields, swimming pools, community center buildings, libraries, art centers, after school care facilities, trails, picnic areas, barbecue facilities, water fountains, and natural habitat areas.

Urban Agricultural Transition Area
The intent of the City of Davis UATA land use designation is:

1) To provide a buffer and minimize conflicts between urban and agricultural areas.
2) To provide public open space.
3) To define the planned urbanized edge of the City, as one of many useful growth management tools.

City of Davis Zoning Designations
The Davis Municipal Code defines the surrounding zoning designations as follows:

Planned Development
The P-D district is intended to allow diversification in the relationship of various buildings, structures and open spaces in order to be relieved from the rigid standards of conventional zoning. Pursuant to Section 40.22.120 of the City of Davis Municipal Code, a P-D district is indicated on the official zoning map by "P-D," followed by an identifying serial number that refers to the preliminary development plans for the particular zone. Table 4.9-1 includes the specific serial numbers of the surrounding parcels currently zoned P-D.

Public/Semi-Public
The P-SP zoning district is intended to provide space within the community for public uses, schools, religious institutions, hospitals, and similar uses that promote a suitable environment for community services and are not detrimental to surrounding land uses. Public/semi-public uses, particularly those of a smaller scale, are also permitted or conditionally permitted in other zoning districts and planned developments.

Applicable Special Districts
The project site is currently located within the East Davis Fire Protection District, which encompasses a portion of Yolo County, largely east of the City of Davis and west of the City of Sacramento. The East Davis Fire Protection District consists of mostly agricultural land uses, but also commercial and industrial uses that are mainly oriented toward agriculture. Annexation of the project site to the City of Davis would also require Yolo County Local Agency Formation Commission (LAFCo) approval of detachment of the project site from the East Davis Fire Protection District, as the City of Davis Fire Department (DFD) would provide fire protection services to the site upon annexation.

4.9.3 REGULATORY CONTEXT

The following is a description of the regulatory context under which land use and planning is managed at a State and local level.

State Regulations

The following are applicable State regulations related to land use and planning related to the proposed project.

Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.)

In California, the establishment and revision of local government boundaries is governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH). The CKH was a comprehensive revision of the Cortese-Knox Local Government Reorganization Act of 1985, which was itself a consolidation of three major laws governing boundary changes. The three laws that governed changes in the boundaries and organization of cities and special districts prior to 1986 were:

- The Knox-Nisbet Act of 1963, which established LAFCos with regulatory authority over local agency boundary changes.
- The District Reorganization Act of 1965 (DRA), which combined separate laws governing special district boundaries into a single law.
- The Municipal Organization Act of 1977 (MORGA), which consolidated various laws on city incorporation and annexation into one law.

CKH established procedures for local government changes of organization, including City incorporations, annexations to a City, and special district consolidations. LAFCos have numerous powers under CKH, the most significant of which is the power to act on local agency boundary changes and to adopt SOIs for local agencies. Secondary purposes of LAFCos include the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies.

Local Regulations

The following are local regulations related to land use and planning applicable to the proposed project.

Sacramento Area Council of Governments

Sacramento Area Council of Governments (SACOG) is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the region and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTP/SCS provides a 20-year transportation vision and corresponding list of projects, while the MTIP identifies short-term projects within a seven-year horizon in more detail.

Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2020 MTP/SCS was adopted by the SACOG board on November 18, 2019. The MTP/SCS is a long-range plan for transportation improvements in the region and provides a 20-year transportation vision and corresponding list of projects. The plan is based on projections for

growth in population, housing, and jobs. SACOG determines the regional growth projections by evaluating baseline data (existing housing units and employees, jobs/housing ratio, and percent of regional growth share for housing units and employees), historic reference data (based upon five- and ten-year residential building permit averages and historic county-level employment statistics), capacity data (General Plan data for each jurisdiction), and current MTP data about assumptions used in the most recent MTP/SCS. SACOG staff then meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, SACOG makes a regional growth forecast for new homes and new jobs, based upon an economic analysis provided by a recognized expert in order to estimate regional growth potential based on market analysis and related economic data, which is incorporated into the MTP/SCS.

Yolo County Local Agency Formation Commission

Yolo County LAFCo is an independent agency responsible for the implementation of the CKH. Yolo County LAFCo is empowered to review, approve, or deny boundary changes, City annexations, consolidations, special district formations, incorporations for cities and special districts, and to establish local SOIs. The SOI for each governmental agency is a plan for the future boundary and service area. As discussed above, the LAFCo function is outlined in Government Code, Section 56000 et seq., known as the CKH.

Yolo County Local Agency Formation Commission Standards of Evaluation

The Yolo County LAFCo is charged with the responsibility of preservation of agricultural land, orderly development, and the efficient provision of urban services through evaluating the loss of agricultural land to development and the effect the proposed development would have on adjacent agricultural lands, as well as the ability of a City to provide urban services to the property. The Yolo County LAFCo has adopted Standards for Evaluation of Proposals, which include several policies applicable to the proposed project. Many of the policies provide guidance as to which territories are favored by the Yolo County LAFCo in annexations. The policies also address agricultural preservation and promotion, requirements for pre-zoning and tax sharing agreements, and ability of the annexing agency to provide adequate water supply in a timely fashion.

The Amended and Restated Pass-Through Agreement

The Amended and Restated Pass-Through Agreement, entered into November 20, 2001, between the Redevelopment Agency, the City of Davis, and Yolo County provides the City with the ability to review project proposals in the unincorporated area surrounding the City. The City may withhold tax increment revenue that is passed through to Yolo County if the County approves “urban development” in the identified area. Although the Redevelopment Agency has been dissolved, the City and the County continue to operate under the provisions of the Agreement.

City of Davis General Plan

The applicable Davis General Plan policies and standards adopted for the purpose of avoiding or mitigating an environmental effect are presented at the end of this chapter in Table 4.9-2.

Davis Municipal Code

The Davis Municipal Code ordinances related to land use and planning that are applicable to the proposed project are presented below.

Article 41.01 Citizens' Right to Vote on Future Use of Open Space and Agricultural Lands (Commonly known as Measure J/R/D)

The City of Davis Zoning Ordinance requires voter approval for changes to land use designations on the Land Use Map from Agricultural or Urban Reserve to Urban land use designations or from Agricultural to Urban Reserve land use designations. The section pertaining to voter approval of the Davis Zoning Ordinance is included below.

Section 41.01.020 Voter approval.

A. Voter Approval of Changes to Land Use Designations on the Land Use Map from Agricultural or Urban Reserve to Urban land use designations or from Agricultural to Urban Reserve land use designations.
   1. Each and every proposed amendment or modification of the Land Use Map to modify the land use designation of lands designated for agricultural, open space or urban reserve use on the Land Use Map to an urban or urban reserve designation is a significant change that affects the City and its ability to maintain its vision for a compact urban form surrounded by farmlands and open space. Any such proposal, therefore, requires public participation in the decision, including, but not limited to, voter approval of the proposed amendment or modification of the Land Use Map.
   2. Any application for an amendment or modification of the Land Use Map that proposes changing the Land Use Map land use designation for any property from an agricultural, open space, or urban reserve land use designation (e.g. agricultural, open space, agricultural reserve, urban reserve, environmentally sensitive habitat, Davis Greenbelt) to an urban land use designation or from an agricultural designation to an urban reserve designation shall require:
      a. Establishment of baseline project features and requirements such as recreation facilities, public facilities, significant project design features, sequencing or phasing, or similar feature and requirements as shown on project exhibits and plans submitted for voter approval, which cannot be eliminated, significantly modified or reduced without subsequent voter approval.
      b. Approval by the City Council, after compliance with the California Environmental Quality Act, the State Planning and Zoning laws and any other applicable laws or regulations, and then
      c. Approval by an affirmative majority vote of the voters of the City of Davis voting on the proposal. The land use designation amendment or modification shall become effective only after approval by the City Council and the voters. The City shall not submit any application to the voters if the application has not first been approved by the City Council, unless otherwise required by law.
   3. If, after compliance with the California Environmental Quality Act and other applicable laws, the City Council modifies or amends the land use designation for any property from an urban land use designation to an agricultural, open space, or urban reserve land use designation, the land use of that property shall not be amended or modified from the agricultural, open space, or urban reserve designation to an urban land use designation without first complying with this Article, including but not limited to the voter approval requirements set forth in subsection A(2), above.

4.9.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to land use and planning. In addition, a discussion of the potential impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a land use and planning impact may be considered significant if any potential effects of the following conditions, or potential thereof, would result with the proposed project's implementation:

- Physically divide an established community (see Chapter 5, Effects Not Found to be Significant); or
- 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.

As noted above, issues related to whether the proposed project would result in the following impact are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- Physically divide an established community.

Method of Analysis

The section below evaluates the proposed project for compatibility with existing and planned adjacent land uses and for consistency with the City's adopted plans, policies, and zoning regulations. Physical environmental impacts resulting from development of the proposed project are discussed in the environmental resource sections of the various technical chapters within this EIR. The following discussion complies with Section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting. The ultimate determination of consistency rests with the City Council.

Project-Specific Impacts and Mitigation Measures

The following discussion of land use and planning impacts is based on development of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.9-1 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. Based on the analysis below, the impact is *less than significant*.

The General Plan Guidelines published by the State Office of Land Use and Climate Innovation (LCI) define consistency as follows, "An action, program, or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment." Therefore, the standard for analysis used in this EIR is in general agreement with the policy language and furtherance of the policy intent (as determined by a review of the policy context).

The determination that the project is consistent or inconsistent with the City of Davis General Plan policies or other plans and policies is ultimately the decision of the Davis City Council. Furthermore, although CEQA analysis may identify some areas of general consistency with City policies, the City has the ability to impose additional requirements or conditions of approval on a project, at the time of its approval, to bring a project into more complete conformance with existing policies. A discussion of the project's general agreement with policy language and furtherance of policy intent is provided in further detail below.

Sphere of Influence Amendment and Annexation

As previously discussed, the project site is currently located in an unincorporated portion of Yolo County and is located outside the City of Davis SOI. Thus, the proposed project includes a request to amend the City of Davis SOI to adjust the City's SOI boundary lines and annex the approximately 232-acre site into the City of Davis. The SOI Amendment and Annexation would incorporate the urban development area and the UATA into the City's SOI and incorporated limits, and are ultimately subject to approval by the Yolo LAFCo as a responsible agency. The City of Davis would be responsible for approving a resolution authorizing the project applicant to submit an SOI Amendment and Annexation application to Yolo LAFCo.

General Plan Amendment

The project site is designated by Yolo County as AG and does not currently have a City General Plan land use designation. The proposed General Plan map amendment would redesignate the project site with City of Davis land use designations, consistent with the uses included as part of the proposed project, which are discussed further below and illustrated in Figure 4.9-2. The General Plan Amendment requested as part of the proposed project would redesignate the approximately 232-acre project site from the Yolo County General Plan land use designation of AG to the following City of Davis land use designations:

- 44.8 acres of Residential – Low Density (LDR);
- 66.6 acres of Residential – Medium Density (MDR);
- 22.9 acres of Residential – High Density (HDR);
- 1.5 acres of Neighborhood Retail;
- 19.2 acres of Park/Recreation;
- 8.7 acres of Neighborhood Greenbelt; and
- 44.3 acres of UATA.

The General Plan Amendment would also amend Table 3 and Map 4 of the Transportation Element to allow 4+ lanes after 2015 for the Alhambra Drive to Alhambra Drive segment of the East Covell Boulevard/Mace Boulevard roadway (see Appendix C of this EIR). The widening of East Covell Boulevard is not required for the proposed project, but would be necessary under cumulative conditions for the proposed project and other reasonably foreseeable development. The General Plan may be amended prior to approval of the proposed project, in which case the included amendments to address the widening of East Covell Boulevard under cumulative conditions would not be included with the project approvals. The General Plan Amendment would add the new footnote 9 to City of Davis Transportation Element Table 3 and revise Map 4 of the Transportation Element to reflect four lanes.

Figure 4.9-2
General Plan Amendment



Pre-zoning

Corresponding with the project site's current Yolo County land use designation, the site is zoned by Yolo County as A-N. Following annexation into the City Limits, the project site would be pre-zoned to the City's Planned Development (P-D) zone with more specific subareas (see Figure 4.9-3). The P-D zoning designation is intended to allow for greater flexibility from the development standards established for the City's conventional zoning districts. As part of approval of the Pre-zoning to P-D, the proposed project would be required to adhere to the development standards set forth by the final P-D (Final P-D), which would also be subject to City approval.

Davis Municipal Code Section 40.22.060 anticipates a preliminary approval of a P-D and Section 40.22.090 anticipates a final application and approval. With the inclusion of the Vesting Tentative Subdivision Map and Pre-Zoning, the project seeks final approval of the Final P-D under Section 40.22.090. According to Davis Municipal Code Section 40.22.090, a Final P-D for the proposed project must contain data and information enumerated therein, such as land uses proposed for the P-D zone, location of parks and trails, proposed street layout, development standards, and a proposed tentative subdivision map. The components of the P-D for the proposed project are discussed further within Chapter 3, Project Description, of this EIR.

Policy Discussion

As noted above, the ultimate question of the meaning of particular General Plan policies, and thus the project's consistency with them, lies with the City Council. It is worth noting, however, that the language found in general plans is sometimes susceptible to varying interpretations, and reasonable minds may differ as to the meaning of particular policies and how to apply them to proposed projects. Case law interpreting the Planning and Zoning Law (Gov. Code, Section 65000 et seq.) makes it clear that: (i) the ultimate meaning of such policies is to be determined by the elected legislative body or a lower tier decision-making body such as a planning commission, as opposed to City Staff and EIR consultants, applicants, or members of the public; and (ii) the decision-making body's interpretations of such policies will prevail in court (if challenged) if the interpretations are "reasonable," even though other reasonable interpretations are also possible (see *No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal.App.3d 223, 245-246, 249). Courts also have recognized that, because general plans often contain numerous policies adopted to address differing or competing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or is arguably inconsistent with some specific policies within a given general plan (*Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 719). Furthermore, courts strive to "reconcile" or harmonize seemingly disparate general plan policies to the extent reasonably possible (No Oil, supra, 196 Cal.App.3d at p. 244). Agencies should do the same.

Some policies, in fact, may be irreconcilable. As the courts have said, "it is beyond cavil that no project could completely satisfy every policy stated in the [General Plan], and that state law does not impose such a requirement" (*Sequoyah, supra*, 23 Cal.App.4th 704, 719, citing *Greenebaum v. City of Los Angeles* (1984) 153 Cal.App.3d 391, 406-407 and 59 Ops.Cal.Atty.Gen. 129, 131 (1976)).

Figure 4.9-3
Proposed Zoning

Sub Area	PD Designation	Gross Acres*
E, F, G, H	Residential Low Density	44.8
I, J, K, L, M, N, O, P	Residential Medium Density	65.9
S, T, U	Residential High Density	23.8
B, W, X	Park/ Recreation	19.2
Y	Neighborhood Retail	1.5
C, D, Q, R, V	Neighborhood Greenbelt	8.7
A	Urban Agriculture Transition Area	44.3
Z	Major Streets	24.2
	Total	**232.4**

* Note: PD acreages are gross and include internal streets, which should be removed for the purposes of residential area and density calculations.



*Figure not OCR compatible.

"A general plan must try to accommodate a wide range of competing interests—including those of developers, neighboring homeowners, prospective homebuyers, environmentalists, current and prospective business owners, jobseekers, taxpayers, and providers and recipients of all types of city-provided services—and to present a clear and comprehensive set of principles to guide development decisions. Once a general plan is in place, it is the province of elected [city] officials to examine the specifics of a proposed project to determine whether it would be 'in harmony' with the policies stated in the plan" (*Sequoyah*, *supra*, 23 Cal.App.4th at p. 719, citing *Greenebaum*, *supra*, 153 Cal.App.3d at p. 406). Nevertheless, proposed projects are required to be consistent with all General Plan policies that are "fundamental, mandatory, and clear" (*Families Unafraid to Uphold Rural El Dorado County v. El Dorado County Bd. of Supervisors* (1998) 62 Cal.App.4th 1332, 1341-1342; *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 782 ["[a] project is inconsistent if it conflicts with a general plan policy that is fundamental, mandatory, and clear"]).

Should the City Council choose to approve the proposed project, the Council may rely on the analysis in Table 4.9-2 as support for the conclusion that the development, which includes General Plan amendments, is consistent with the General Plan as amended. Certification of the Final EIR will be indicative of agreement with the conclusions in the table.

Approval of the aforementioned entitlements for the proposed project are discretionary actions subject to approval by the Davis City Council. Should the City Council approve the requested entitlements, the development would be rendered consistent with the City's General Plan and Zoning Ordinance.

From a policy perspective, Table 4.9-2 at the end of this chapter sets forth the reasoning for City Staff's determination that the proposed project would be generally consistent with the applicable policies in the Davis General Plan adopted for the purpose of avoiding or mitigating an environmental effect.

Yolo County LAFCo Consistency Discussion

The proposed project would require an SOI Amendment and the annexation of the approximately 232-acre site into the City of Davis. Should the requested entitlements be approved by the City of Davis City Council, and subsequently, the citizens of Davis through a Measure J/R/D vote, an application for annexation would be filed with Yolo County LAFCo for review and consideration for approval. Yolo County LAFCo is considered a responsible agency for the proposed project, and as such, this EIR includes a discussion of the project's consistency with Yolo County LAFCo's policies related to annexation and SOI Amendment proposals. The following information has been provided, as it relates to several Yolo County LAFCo policies regarding annexation proposals:

1. The project site is located outside of the City's SOI. Thus, the proposed project includes a request to amend the Davis SOI to adjust the City's SOI boundary lines and annex the approximately 232-acre site into the City of Davis.

2. The proposed project would include a request for annexation of approximately 232 acres from Yolo County to the City of Davis. The new development would be located on the southern 188.1 acres, while the remaining 44.3-acre portion of the project site would function as a UATA.

3. The project site is contiguous to the City Limits and can be served by water and sewer lines within adjacent rights of way.

4. Because the project site is currently located within the East Davis Fire Protection District, the proposed project would also include a request for detachment from the East Davis Fire Protection District. Annexation of the project site into the City of Davis would require Yolo County LAFCo approval of the detachment of the site from the East Davis Fire Protection District, as the DFD would provide fire protection services upon annexation.

5. While the proposed project would result in the conversion of agricultural land to urban uses, the discussion in Chapter 4.2, Agricultural Resources, of this EIR confirms the preservation of equivalent acreage of farmland consistent with Mitigation Measure 4.2-1. In addition, the proposed 44.3 acres of UATA would incorporate the minimum 150-foot agricultural buffer required by the City.

6. The project site is currently zoned A-N by Yolo County. Therefore, as a condition to annexation, the City of Davis proposes to pre-zone the project site to P-D.

Conclusion

Based on the above, the proposed project would not cause a significant environmental impact due to conflicts with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect (including the policies discussed in Table 4.9-2), and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.9-2 Cause a significant cumulative 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. Based on the analysis below, the cumulative impact is *less than significant*.

A cumulative analysis of land use is not included because land use plans or policies and zoning generally do not combine to result in cumulative impacts. The determination of significance for impacts is whether a development project would 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. Conflicts are site-specific, and thus, are only addressed on a project-by-project basis. As shown in Table 4.9-2, the proposed project would be generally consistent with relevant policies in the City's General Plan.

Therefore, the proposed project would not cause a significant cumulative 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, and the cumulative impact would be ***less-than-significant***.

Mitigation Measure(s)

None required.

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
Urban Design and Neighborhood Preservation		
Policy UD 2.1	Preserve and protect scenic resources and elements in and around Davis, including natural habitat and scenery and resources reflective of place and history.	As discussed under Impact 4.1-1 in Chapter 4.1, Aesthetics, of this EIR, the project site does not contain any identified natural scenic or historic resources. Therefore, development of the project site with the proposed urban uses would not present a conflict with General Plan Policy UD 2.1. Similar to the site conditions when the General Plan EIR was prepared, the site consists almost entirely of uninterrupted active agricultural land. As development along the City's boundaries continues in the future, such areas will become increasingly lost due to conversion to urban uses. However, incorporation of the 44.3-acre UATA would preserve a portion of the currently available on-site scenic agricultural vista. Therefore, based on the above, this EIR concludes that the proposed project would not have a substantial adverse effect on a scenic vista.
Policy UD 2.2	Maintain and increase the amount of greenery, especially street trees, in Davis, both for aesthetic reasons and to provide shade, cooling, habitat, air quality benefits, and visual continuity.	As discussed in Chapter 3, Project Description, of this EIR, the proposed project would include on-site parks and a greenbelt. In addition, landscaping within the project site would comply with all applicable policies and regulations. Based on the project's Sustainability Plan, the proposed project would also plant 2,500 new trees throughout the site to create an urban forest, shaded trails, pollinator nodes, and neighborhood gathering areas. As such, the proposed project would comply with General Plan Policy UD 2.2.
Policy UD 2.3	Require an architectural "fit" with Davis' existing scale for new development projects.	The proposed project would pre-zone the site to the City's P-D zone. Section 40.22.110 of the City's Municipal Code establishes the findings required for approval of a Final Planned Development (FPD). For example, pursuant to Section 40.22.110(c), the FPD shall be reviewed by the Planning Commission or the City Council to ensure that any residential development shall constitute a residential environment of sustained desirability and stability in harmony with the character of the surrounding neighborhood, that sites for public facilities are adequate to serve the anticipated population, and that standards for open space are at least equivalent to standards otherwise specified in the Davis Municipal Code. Compliance with the requirements of Section 40.22.110 would ensure that the FPD for the proposed project would include specifications related to requiring development of the project to be consistent with all applicable plans and ordinances, and to be compatible with surrounding existing uses. In addition, as noted in Chapter 4.1, Aesthetics, of this EIR and consistent with Section 40.31 of the Davis Municipal Code, Design Review of the site plans and

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
		architecture of buildings, signage, and improvements would ensure that proposed structures are aesthetically consistent with the existing development in the vicinity of the project site. As such, the City's Design Review process, which occurs prior to issuance of building permits, would ensure that the proposed project would be consistent with General Plan Policy UD 2.3. Based on the above, the proposed project would not conflict with General Plan Policy UD 2.3.
Policy UD 2.4	Create affordable and multi-family residential areas that include innovative designs and on-site open space amenities that are linked with public bicycle/pedestrian ways, neighborhood centers, and transit stops.	The proposed project would include the development of both single- and multi-family residences, including affordable residential units. In addition, the proposed project would include parks, open space, and greenbelts. The proposed project would include a total of approximately 19.2 acres of parks (including the community park, mini park, and dog park), 8.7 acres of greenbelts, and 44.3 acres of open space within the UATA. As discussed in Chapter 4.13, Transportation, of this EIR, following buildout of the project site, on-site development would be adequately connected with surrounding existing bicycle, pedestrian, and transit facilities consistent with General Plan Policy UD 2.4, including connections to the existing undercrossing to the south and to the existing trails to the north and west. Furthermore, the proposed project would include the development of neighborhood retail, residential, recreational, and public uses, creating a neighborhood center consistent with the policy.
Policy UD 3.2	Provide exterior lighting that enhances safety and night use in public spaces, but minimizes impacts on surrounding land uses.	As discussed under Impact 4.1-4 in Chapter 4.1, Aesthetics, of this EIR, the proposed project would be required to comply with Mitigation Measure 4.1-4, which would ensure that a lighting plan is prepared and implemented to minimize light and trespass into adjacent parcels as required by General Plan Policy UD 3.2.
Land Use and Growth Management		
Policy LU A.3	Require a mix of housing types, densities, prices and rents, and designs in each new development area.	As discussed in Chapter 3, Project Description, of this EIR, the proposed project would include development of a mixed-use community with a total of 1,250 dwelling units, comprised of both affordable and market-rate single- and multi-family residences. Residential densities would include low-, medium-, and high-density areas. Based on the mix of housing types and densities, the proposed project would be consistent with General Plan Policy LU A.3.

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
Policy LU N.5	Require neighborhood greenbelts in all new residential development areas. Require that a minimum of 10 percent of newly-developing residential land be designated for use as open space primarily for neighborhood greenbelts.	As discussed under Impact 4.12-4 in Chapter 4.12, Public Services and Recreation, of this EIR, the proposed greenbelts would comprise approximately eight percent of the urban development area (which excludes the UATA). However, 20 percent of the greenbelt requirement is allowed to be provided through parkland or open space dedication. In order to meet the greenbelt requirement, 2.1 (10.47 x 0.2) acres of the 2.8-acre parkland overage would be added to the 8.7 acres of proposed greenbelt area for a total of 10.8 acres of provided greenbelt and parkland area. Thus, the combined greenbelt and parkland area would comprise approximately 10 percent of the urban development area and the greenbelt acreage would satisfy the City's open space requirements for new development. Therefore, the provided greenbelts would comply with General Plan Policy LU N.5.
Policy LU N.6	Prime agricultural land should remain in agricultural production in the wider segments of the Urban Agriculture Transition Area.	The proposed project would include a total of approximately 44.3 acres of UATA uses along the northern and eastern portions of the project site, including a wider portion in the northwest corner of the site. However, the wider portion of the UATA would not be considered suitable farmland due to the proximity to Channel A and the existing and proposed receptors.
Agriculture, Soils, and Minerals		
Policy AG 1.1	Protect agricultural land from urban development except where the general plan land use map has designated the land for urban uses.	The Yolo County General Plan currently designates the project site as AG. The City of Davis has not assigned any land use designations, including agricultural uses, to the project site. The UATA is zoned A-N by Yolo County; however, development is not proposed for the UATA. Approval of the requested General Plan Amendment would be a discretionary action subject to approval by the Davis City Council. Should the City Council approve the entitlement(s) associated with the project, the development would be rendered consistent with the City's General Plan and Zoning Ordinance. As such, the proposed project would comply with General Plan Policy AG 1.1.
Air Quality		
Policy AIR 1.1	Take appropriate measures to meet the AQMD's goal for improved air quality.	All projects within the Yolo-Solano Air Quality Management District (YSAQMD), including the proposed project, are required to comply with all YSAQMD rules and regulations during construction and operation, as summarized beginning on page 4.3-34 of this EIR. The YSAQMD also encourages all projects to implement best management practices (BMPs) to reduce dust emissions and avoid localized health impacts. Furthermore, the proposed project would be required to implement all mitigation measures included in Chapter 4.3, Air



Table 4.9-2
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Policy		Project Consistency
		Quality, Greenhouse Gas Emissions, and Energy, of this EIR, which would reduce emissions associated with the proposed development to the maximum extent feasible. Overall, the proposed project would take appropriate measures to meet YSAQMD's air quality goals and would comply with General Plan Policy AIR 1.1.
Transportation		
Policy TRANS 1.5	Strive for carbon-neutrality or better from the transportation component of new residential development.	Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR includes various measures to reduce emissions of greenhouse gases (GHGs) associated with project operations. Mitigation Measure 4.3-8 requires the project proponent to prepare and implement a GHG Reduction Plan to demonstrate a downward trajectory in GHG emissions, towards the goal of zero net GHG emissions by the year 2040. Pursuant to Mitigation Measure 4.3-8, if operational emissions are determined to exceed established thresholds, the project would be required to implement reduction measures to further reduce operational emissions. Reduction measures could include preparation and implementation of a Transportation Demand Management (TDM) Program, prepared in accordance with the City's Municipal Code. The TDM Program would reduce single-passenger vehicle use and increase use of non-motorized and low-carbon transportation modes. Implementation of Mitigation Measure 4.3-8 would ensure consistency with General Plan Policy TRANS 1.5.
Policy TRANS 1.6	Reduce carbon emissions from the transportation system in Davis by encouraging the use of non-motorized and low carbon transportation modes.	Existing and planned bicycle lanes and pedestrian walkways in the project vicinity would allow for high pedestrian and bicycle connectivity between the project site and existing uses within the project vicinity. Additionally, the proposed project would include bicycle and pedestrian improvements, such as the extension of a Class I shared-use path along the entirety of the project frontage on the north side of East Covell Boulevard, which would connect to the existing path to the west and the underpass of East Covell Boulevard at the project's westerly boundary. Thus, the proposed project encourages non-motorized transportation and would comply with General Plan Policy TRANS 1.6.
Policy TRANS 1.7	Promote the use of electric vehicles and other low-polluting vehicles, including Neighborhood Electric Vehicles (NEV).	As discussed in Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, the proposed project would include the provision of electric vehicle (EV) charging infrastructure, as required by Section 8.01.090 of the Municipal Code and consistent with General Plan Policy TRANS 1.7. The non-residential and residential EV charging station standards required by Section

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
		8.01.110 of the Municipal Code are presented in Table 4.3-6 and Table 4.3-7 of this EIR.
Policy TRANS 1.8	Develop and maintain a work trip-reduction program designed to reduce carbon emissions, criteria pollutants, and local traffic congestion.	Policy TRANS 1.8 is intended to develop a citywide work trip-reduction program, which has not yet been developed by the City. Nonetheless, Mitigation Measures 4.13-3(a), 4.13-3(b), and 4.13-3(c) would require the proposed project to implement TDM strategies to reduce vehicle miles traveled (VMT), improve roadway infrastructure, and fund a Transit Service and Facilities Plan for the proposed project area. The previously stated mitigation measures would ensure consistency with General Plan Policy TRANS 1.8 to the maximum extent feasible.
Policy TRANS 2.4	As part of the initial project review for any new project, a project-specific traffic study may be required. Studies shall identify impacted transportation modes and recommend mitigation measures designed to reduce these impacts to acceptable levels.	In preparation of this EIR and consistent with General Plan Policy TRANS 2.4, Fehr & Peers conducted a Transportation Impact Study for the proposed project. The Transportation Impact Study evaluated the effects of the proposed project on new and planned transportation infrastructure, and provided mitigation to reduce potential impacts to the maximum extent feasible.
Policy TRANS 2.5	Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.	Consistent with General Plan Policy TRANS 2.5, the proposed project would construct new pedestrian and bicycle facilities and expand the local network as follows: • Extension of Class I shared-use path along the entirety of the project frontage on the north side of East Covell Boulevard, which would connect to the existing path to the west and the underpass of East Covell Boulevard at the project's westerly boundary. • Multiple shared-use path extensions into the project site from the proposed east-west shared-use path along East Covell Boulevard. • Open space trail connections to the existing Wildhorse Agricultural Buffer to the west of the project site, including 10-foot-wide shared-use paths. • The following modifications to the East Covell Boulevard/Alhambra Drive/westerly project access intersection would be made to enhance bicycling and walking in the area: ○ The pair of triangular medians in the southwest and southeast corners of the intersection, which currently allow free-flow, yield-controlled vehicle movements, would be replaced with

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
		signal-controlled right-turn lanes. Additionally, the curb returns in the corners would be reconstructed with smaller radiuses, removing excess pavement and reducing turning speeds. ○ Crosswalks would be added to the west, east, and north legs, and maintain crosswalk on south leg. ○ Bicycle detection and signal phasing/timing would be provided for northbound and southbound movements. ○ Right turns on red would be restricted to reduce conflicts between vehicles and bicyclists and pedestrians. The foregoing improvements would support the implementation of planned pedestrian and bicycle improvements, including the extension of the Class I shared-use path on the north side of East Covell Boulevard. As such, the proposed project would not interfere with the implementation of planned future pedestrian or bicycle facilities.
Policy TRANS 3.1	Facilitate the provision of convenient, reliable, safe, and attractive fixed route, commuter, and demand responsive public transportation that meets the needs of the Davis community, including exploring innovative methods to meet specialized transportation needs.	As discussed under Impact 4.13-3 in Chapter 4.13, Transportation, of this EIR, the project site is located in close proximity to existing bus stops, and the proposed project includes the construction of two new bus stops on East Covell Boulevard. Furthermore, Mitigation Measure 4.13-3(c) would require the completion of a Transit Service and Facilities Plan for the area encompassing the project site and other development along the north side of the Covell Boulevard and Mace Boulevard corridor between the westerly City Limits and the I-80 interchange. The Transit Service and Facilities Plan would provide funding for future transit facilities improvements. Overall, the proposed project would not conflict with General Plan Policy TRANS 3.1.
Policy TRANS 3.3	Require new development to be designed to maximize transit potential.	See the response to Policy TRANS 3.1 above.
Policy TRANS 4.2	Develop a continuous trails and bikeway network for both recreation and transportation that serves the Core, neighborhoods, neighborhood shopping centers, employment centers, schools and other institutions; minimize conflicts between pedestrians, bicyclists, equestrians, and automobiles; and minimize impacts on wildlife. Greenbelts and separated bike paths on arterials	See the response to Policy TRANS 2.5 above.

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Policy		Project Consistency
	should serve as the backbone of much of this network.	
Policy TRANS 4.4	Provide pedestrian and bicycle amenities.	See the response to Policy TRANS 2.5 above.
Policy TRANS 4.7	Develop a system of trails around the edge of the City and within the City for recreational use and to allow pedestrians and bicyclists to reach open space and natural areas.	See the response to Policy TRANS 2.5 above.
Energy		
Policy ENERGY 1.3	Promote the development and use of advanced energy technology and building materials in Davis.	The proposed project would be built in compliance with the requirements of the CalGreen Tier 1 standards, as required by Section 8.01.090 of the Municipal Code. In addition, the proposed project would not include the use of natural gas and all on-site residents would also have the opportunity to opt into receiving energy from Valley Clean Energy (VCE). As such, the proposed project would not conflict with General Plan Policy ENERGY 1.3.
Policy ENERGY 1.5	Encourage the development of energy-efficient subdivisions and buildings.	The potential for the proposed project to result in the inefficient or wasteful use of energy, or conflict with a State or local plan for renewable energy or energy efficiency, is analyzed under Impact 4.3-5 of this EIR. Based on the analysis included therein, the impact related to such was determined to be less than significant. As such, the proposed project would comply with General Plan Policy ENERGY 1.5.
Habitat, Wildlife, and Natural Areas		
Policy HAB 1.1	Protect existing natural habitat areas, including designated Natural Habitat Areas.	Designated Natural Habitat Areas do not occur within the project site. In addition, the proposed project would be subject to payment of applicable Yolo HCP/NCCP habitat conversion fees. Land cover conversion fees, in effect at time of payment, would be applied for the land cover impacts associated with the proposed project, in accordance with Yolo HCP/NCCP guidelines. Therefore, the Proposed Project would not conflict with General Plan Policy HAB 1.1.
Policy HAB 1.2	Enhance and restore natural areas and create new wildlife habitat areas.	See response to Policy HAB 1.1 above. Payment of land cover impact fees would support the regional preservation of foraging habitat for special-status species under the Yolo HCP/NCCP. In addition, as noted within Chapter 4.4, Biological Resources, of this EIR, it is acknowledged that agricultural operations concurrently occur within approximately 10 feet of Channel A. The proposed project would increase the non-disturbance setback from Channel A to a minimum of 50 feet, which will be subject to approval by the Yolo Habitat

Table 4.9-2
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Policy		Project Consistency
		Conservancy. Therefore, the proposed project would support General Plan Policy HAB 1.2.
Historic and Archaeological Resources		
Policy HIS 1.2	Incorporate measures to protect and preserve historic and archaeological resources into all planning and development.	Consistent with General Plan Policy HIS 1.2, Chapter 4.5, Cultural and Tribal Cultural Resources, of this EIR includes various measures to ensure adverse effects to unknown historic and archaeological resources associated with the proposed project, should they be discovered during construction, are avoided.
Policy HIS 1.3	Assist and encourage property owners and tenants to maintain the integrity and character of historic resources, and to restore and reuse historic resources in a manner compatible with their historic character.	Consistent with General Plan Policy HIS 1.3, Chapter 4.5, Cultural and Tribal Cultural Resources, of this EIR includes mitigation to ensure impacts to unknown cultural and/or tribal cultural resources associated with the project site are reduced. As discussed under Impact 4.5-1, known historic resources have not been documented within the project site and historic sites or artifacts were not identified during the field survey conducted as part of the Cultural Resources Assessment. Therefore, development of the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5.
Hazards		
Policy HAZ 1.1	Site and design developments to prevent flood damage.	According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) 06113C0604G, effective June 18, 2010, the northern portion of the site is located within Zone A, which is defined as a Special Flood Hazard Area (SFHA) determined to flood during the one percent annual flood event. However, as discussed under Impact 4.8-4 within Chapter 4.8, Hydrology and Water Quality, of this EIR, the proposed project would not result in increased peak runoff or water volumes relative to the existing conditions. The proposed project would include volumetric storage on-site sufficient to accommodate post-development runoff volume. In addition, extra storage has been built into the project through the oversizing of the detention basins and the inclusion of the water treatment area north of Channel A. Based on the above, the proposed project would comply with General Plan Policy HAZ 1.1.
Policy HAZ 2.1	Take necessary precautions to minimize risks associated with soils, geology and seismicity.	Risks associated with soils, geology, and seismicity are discussed in Chapter 4.6, Geology and Soils, of this EIR. As discussed therein, development of the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground

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Policy		Project Consistency
		failure, including liquefaction, and landslides. In addition, as discussed under Impact 4.6-3, the project site is not located on a geological unit or soil that is or would become unstable, and would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. However, the proposed project would have the potential to be exposed to substantial risks related to expansive soils. Out of an abundance of caution, Mitigation Measure 4.6-3 requires preparation of a design-level geotechnical engineering report by a California Registered Civil Engineer or Geotechnical Engineer to the City of Davis Building Division, for review and approval by the City. Implementation of recommendations in the design-level geotechnical engineering report would ensure that risks associated with soils, geology, and seismicity are reduced to a less-than-significant level. As a result, the proposed project would comply with General Plan Policy HAZ 2.1.
Policy HAZ 4.3	Reduce the potential for pesticide exposure for people, wildfire, and the environment.	As discussed in Chapter 4.2, Agricultural Resources, the proposed project would satisfy the agricultural buffer requirements established by the Davis Municipal Code and would include an agricultural buffer that meets the minimum distances between pesticide application and environmentally sensitive areas established by the Yolo County Agricultural Commissioner. Notwithstanding, it is noted that the potential adverse effects of pesticides from adjacent agricultural operations onto future project residents are considered an effect of the environment on the proposed project, which is outside the scope of CEQA. Based on the above, the proposed project would not conflict with General Plan Policy HAZ 4.3.
Policy HAZ 5.1	Reduce the combined load of pollutants generated in the City's wastewater, stormwater and solid waste streams. Such pollutants include, but are not limited to toxic and hazardous substances.	As discussed under Impact 4.8-2 in Chapter 4.8, Hydrology and Water Quality, of this EIR, the proposed project would be subject to the requirements of the City's Municipal Separate Storm Sewer System (MS4) Permit (NPDES General Permit No. CAS000004, Order No. 2013-0001-DWQ) related to post-construction stormwater treatment, pursuant to the National Pollutant Discharge Elimination System (NPDES) Phase II program. Low Impact Development (LID) measures would be integrated throughout the project site to provide stormwater quality treatment. The LID measures are anticipated to include both volume-based BMPs (e.g., bioretention, infiltration features, etc.) and source control BMPs (e.g., preventing runoff from trash enclosures from discharging into the

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Policy		Project Consistency
		storm drain system, ensuring all necessary connections to the proposed sanitary sewer system, etc.). The BMPs would be designed in accordance with the stormwater quality control standards established by Davis Municipal Code Article 30.03 and the California Stormwater Quality Association (CASQA) – California Stormwater BMP Handbook. The wastewater generated on-site would be typical of standard residential uses and would be discharged directly into the City's public wastewater system, avoiding any potential adverse pollutant load for the downstream WWTP. Based on the above, the proposed project would not conflict with General Plan Policy HAZ 5.1.
Water		
Policy WATER 1.2	Require water conserving landscaping.	The project would be required to comply with Chapter 40.42, Water Efficient Landscaping, of the City's Municipal Code, which includes specific standards for the efficient use of water, including within landscaped areas. As such, the proposed project would comply with General Plan Policy WATER 1.2.
Policy WATER 1.3	Do not approve future development within the City unless an adequate supply of quality water is available or will be developed prior to occupancy.	As discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, based on the results of the Water Supply Assessment prepared pursuant to Senate Bill (SB) 610/California Water Code, sufficient water supply is available to serve the proposed project's operational water demand and reasonably foreseeable future development during normal, dry, and multiple dry years. Based on the above, the proposed project would not conflict with General Plan Policy WATER 1.3.
Policy WATER 2.1	Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources.	As discussed under Impact 4.14-2 in Chapter 4.14, Utilities and Service Systems, of this EIR, the City would have sufficient water supplies available to serve buildout of the proposed project, as well as reasonably foreseeable future development, during normal, dry, and multiple dry years. In addition, a discussion of impacts related to groundwater quality and supply is provided under Impact 4.8-3 in Chapter 4.8, Hydrology and Water Quality, of this EIR. As discussed therein, the project site is not considered an important groundwater recharge area, and the proposed project would not involve increased demand on groundwater supplies within an area in a state of overdraft. Thus, the proposed project would not create a conflict with, or impede the implementation

Table 4.9-2
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Policy		Project Consistency
		of, a sustainable groundwater plan and would comply with General Plan Policy WATER 2.1.
Policy WATER 2.2	Manage groundwater resources so as to preserve both quantity and quality.	See the response to Policy WATER 2.1 above.
Policy WATER 2.3	Maintain surface water quality.	A discussion of impacts related to surface water quality is provided under Impacts 4.8-1 and 4.8-2 in Chapter 4.8, Hydrology and Water Quality, of this EIR. As discussed therein, with implementation of mitigation requiring a NPDES General Construction Permit and a final Stormwater Control Plan, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction or operation. As a result, the proposed project would comply with General Plan Policy WATER 2.3.
Policy WATER 3.1	Coordinate and integrate development of storm ponds and channels City-wide, to maximize recreational, habitat and aesthetic benefits.	Stormwater drainage from the project site would be collected in one of the two linked detention basins along the eastern project site boundary. A third basin north of the linked detention basins would be a bioretention basin and receive excess flows from the detention basins. The proposed project would also include a water treatment area within the northern portion of the project site, adjacent to Channel A. The on-site portion of Channel A would coincide with a portion of the 44.3-acre UATA, which would provide a buffer between the project site and the agricultural land to the north and east. The proposed detention basins and Channel A area within the project site would connect to nearby trails, which would offer opportunities for recreational, habitat, and aesthetic benefits to be incorporated. Based on the above, the proposed project would not conflict with General Plan Policy WATER 3.1.
Policy WATER 3.2	Coordinate and integrate design, construction, and operation of proposed stormwater retention and detention facilities City-wide, to minimize flood damage potential and improve water quality.	As discussed in Chapter 4.8, Hydrology and Water Quality, the proposed project would not result in significant impacts related to flood flow or water quality. As such, the proposed project would not conflict with General Plan Policy WATER 3.2.
Policy WATER 5.1	Evaluate the wastewater production of new large scale development prior to approval to ensure that it will fall within the capacity of the plant.	Consistent with General Plan Policy WATER 5.1 and as demonstrated in Chapter 4.14, Utilities and Service Systems, of this EIR, adequate capacity exists at the City's wastewater treatment plant (WWTP) to treat the wastewater that would be generated by the proposed project.

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Policy		Project Consistency
Noise		
Policy NOISE 1.1	Minimize vehicular and stationary noise sources, and noise emanating from temporary activities.	As discussed under Impact 4.10-2 in Chapter 4.10, Noise, of this EIR, stationary noise sources associated with the proposed project would comply with the City's noise level standards. Similarly, traffic noise levels attributable to the proposed project under Existing Plus Project conditions would be below the applicable increase significance criteria. In addition, as discussed under Impact 4.10-1, noise related to temporary construction activities would be reduced with implementation of Mitigation Measure 4.10-1. However, construction noise associated with the majority of construction areas would remain over the applicable five dBA increase criteria, and impacts were determined to be significant and unavoidable. However, because noise emanating from temporary activities would be minimized to the greatest extent feasible, the proposed project would not conflict with General Plan Policy NOISE 1.1.
Policy NOISE 2.1	Take all technically feasible steps to ensure that interior noise levels can be maintained at the levels shown in Table 20.	As discussed under Impact 4.10-2, the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels at existing sensitive receptors located along local roadways or in the vicinity of the project site. Thus, interior noise levels at nearby sensitive receptors would not exceed the standards in General Plan Table 20 and the proposed project would comply with General Plan Policy NOISE 2.1.
Police and Fire		
Policy POLFIRE 1.2	Develop and maintain the capacity to reach all areas of the City with emergency police and fire service within a five-minute emergency response time, 90% of the time. Response time included alarm processing, turnout time, and travel time.	Consistent with General Plan Policy POLFIRE 1.2, and as discussed under Impact 4.12-1 in Chapter 4.12, Public Services and Recreation, of this EIR, the proposed project would dedicate a site along East Covell Boulevard for construction of a new fire station for use by the DFD. If the station is not accommodated on-site, the Village Farms Davis Project has reserved land to accommodate the station adjacent to East Covell Boulevard. Regardless of location, the new fire station would maintain sufficient emergency response times to the surrounding area, which includes the project site. Currently, the required response time standard for the DFD is consistent with the National Fire Protection Association (NFPA) 1710 response time standard: four minutes for the arrival of the first engine company at a fire suppression incident, which is within the response time goal established by General Plan Policy POLFIRE 1.2. The NFPA standards also include a response time of six minutes or less for the

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Policy		Project Consistency
		arrival of the second company, which accounts for a one-minute dispatch processing time, a one-minute turnout time, and a four-minute driving response time.
Policy POLFIRE 3.1	Provide adequate infrastructure to fight fires in Davis.	Consistent with General Plan Policy POLFIRE 3.1, the proposed project or Village Farms Davis Project could include the development of a new fire station, which would allow the DFD to provide fire protection services to the project site, as well as to existing development located in the general site area.
Policy POLFIRE 3.2	Ensure that all new development includes adequate provisions for fire safety.	As discussed under Impact 4.15-2 in Chapter 4.15, Wildfire, of this EIR, the California Fire Code (CFC) requires that an automatic fire sprinkler and/or fire extinguishing system be installed throughout new one- and two-family dwellings. In addition, the proposed project would be subject to the applicable provisions set forth in Appendix B of the CFC, which contains requirements for buildings related to water supply for the purposes of fire flow. Based on the above, the proposed project would comply with General Plan Policy POLFIRE 3.2.
Policy POLFIRE 3.3	Make fire protection services visible and accessible to Davis residents.	See response to Policy POLFIRE 1.2 above.
Youth and Education		
Policy Y&E 8.1	It shall be the policy of the City to require to the extent legally permissible the full mitigation of school impacts resulting from new residential development within the boundaries of the City.	The project would be required to pay school impact fees to the Davis Joint Unified School District (DJUSD) in accordance with the requirements of SB 50.
Policy Y&E 9.1	It shall be the policy of the City to take all legally permissible steps to ensure the full mitigation of impacts of new development on school facilities	See response to Policy Y&E 8.1 above.
Parks and Open Space		
Policy POS 1.5	Attempt to provide all City residents with convenient access to parks and recreation programs and facilities.	The proposed project would provide access to the proposed park areas to future residents by way of vehicles, transit, bicycles, and pedestrian pathways. The two access points into the project site focus on the 16.8-acre community park and 1.7-acre dog park, which are located in the southeastern portion of the site, adjacent to East Covell Boulevard. Pedestrian access would be provided to the community park from existing sidewalks along East Covell Boulevard. Amenities within the community park would include a transit station, playground, a multipurpose field, softball fields, pickleball courts, a gym/classroom building, dog park, and community gathering space. The

Table 4.9-2
City of Davis General Plan Consistency Discussion

Policy		Project Consistency
		proposed project would also include a 0.6-acre mini park located at the north end of the project, accessible from the North Central Greenbelt. The mini park would include a community gathering space, informal green space, and a playground designed for children aged two to five years old. Bikeways are provided throughout the project site with connections to the City's off-site bicycle network. Therefore, consistent with Policy POS 1.5, the proposed project would provide existing and future residents with access to parks and recreational facilities.
Policy POS 1.7	Use all available mechanisms for preservation of open space.	See response to Policy LU A.5.
Policy POS 2.1	Develop the Urban Agricultural Transition Area to have segments which vary in overall size and configuration, level of development, and type of intended activity.	The proposed project would include a passive nature area and agricultural buffer in the northern portion of the project site and an agricultural buffer along the eastern boundary of the project site, which together would constitute the proposed UATA. The UATA would include open space trail connections to the existing Wildhorse Agricultural Buffer to the west of the project site, and would include 10-foot wide shared-use paths, connecting to existing City of Davis trails to the west and northeast of the project site. The proposed project would include a total of approximately 44.3 acres of UATA uses. The UATA buffers would be designed to emulate a natural appearance, with tree groves and native plantings that provide a natural separation between agricultural and urban uses. Davis Municipal Code Section 40A.01.050(b) requires that the UATA have a minimum width of 150 feet. The UATA developed under the proposed project would vary in size, configuration, and type from the existing UATA buffer located adjacent to the Wildhorse neighborhood and the approved Palomino Place Project to the west of the project site. Based on the above, the proposed project would be consistent with General Plan Policy POS 2.1.
Policy POS 3.1	Require creation of neighborhood greenbelts by project developers in all residential projects, in accordance with Policy LU A.5.	See response to Policy LU A.5.
Policy POS 4.2	Construct new parks and recreation facilities.	Consistent with General Plan Policy POS 4.2, and as discussed under Impact 4.12-4 in Chapter 4.12, Public Services and Recreation, of this EIR, the proposed project would include a total of approximately 19.2 acres of parks,

Table 4.9-2
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Policy		Project Consistency
		consisting of a community park, mini-park, and dog park, which would satisfy both the General Plan and Municipal Code parkland requirements. Park design would comply with all applicable City design standards, as confirmed by City review and approval of the proposed project.
Policy POS 6.2	Require dedication of land and/or payment of an in-lieu fee for park and recreational purposes as a condition of approval for subdivisions, as allowed by the Quimby Act (Government Code 66477).	As discussed in Chapter 4.12, Public Services and Recreation, of this EIR, Section 36.08.040 of the City's Municipal Code requires the provision of 0.0131 acres of parkland per dwelling unit. Based on the total of 1,250 new dwelling units, the proposed project would be required to provide 16.38 acres of parkland. Because the proposed project would provide 19.2 acres of parkland, the project would dedicate sufficient land to meet the City's requirements, and payment of in-lieu fees would not be required. Based on the above, the proposed project would not conflict with General Plan Policy POS 6.2.

4.10. Noise

4.10 NOISE

4.10.1 INTRODUCTION

The Noise chapter of the EIR describes the existing noise environment in the project vicinity, and identifies potential impacts and mitigation measures related to noise and vibration associated with construction and operation of the proposed project. The methods by which the potential impacts are analyzed are discussed, followed by the identification of potential impacts and the recommended mitigation measures designed to reduce significant noise and vibration impacts to less-than-significant levels, if required. The Noise chapter is primarily based on the Environmental Noise Assessment (Noise Assessment) prepared for the proposed project by Saxelby Acoustics (Saxelby) (see Appendix P of this EIR),[1] as well as the City of Davis General Plan.[2]

4.10.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section provides background information on noise and vibration, a discussion of acoustical terminology and the effects of noise on people, existing sensitive receptors in the project vicinity, existing sources and noise levels in the project vicinity, and groundborne vibration.

Fundamentals of Acoustics

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected, or undesired, and therefore, may be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

The decibel scale was devised to measure sound. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0.0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in dB correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. A strong correlation exists between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For such reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period

[1] Saxelby Acoustics, LLC. *Environmental Noise Assessment, Willowgrove EIR*. September 19, 2025.
[2] City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.

(usually one hour). The L_{eq} is the foundation of the composite noise descriptor, day/night average level (L_{dn}), and shows very good correlation with community response to noise.

The L_{dn} is based upon the average noise level over a 24-hour day, with a +10 dBA weighing applied to noise occurring during nighttime hours (10:00 PM to 7:00 AM). The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, the noise measurement tends to disguise short-term variations in the noise environment.

The Community Noise Equivalent Level (CNEL) is defined as the 24-hour average noise level with noise occurring during evening hours (7:00 PM to 10:00 PM) weighted by +5.0 dBA, and nighttime hours weighted by +10.0 dBA. The L_{max} is defined as the highest root-mean-square (RMS) sound level measured over a given period of time. The Sound Exposure Level (SEL) is a rating, in decibels, of a discrete event, such as aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.

Table 4.10-1 below lists several examples of the noise levels associated with common situations.

Table 4.10-1
Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
N/A	110	Rock Band
Jet Fly-over at 300 meters (1,000 feet)	100	N/A
Gas Lawn Mower at 1 meter (3 feet)	90	N/A
Diesel Truck at 15 meters (50 feet), at 80 km/hr (50 mph)	80	Food Blender at 1 meter (3 feet) Garbage Disposal at 1 meter (3 feet)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 meters (100 feet)	70	Vacuum Cleaner at 3 meters (10 feet)
Commercial Area Heavy Traffic at 90 meters (300 feet)	60	Normal Speech at 1 meter (3 feet)
Quiet Urban Daytime	50	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
N/A	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Saxelby Acoustics, LLC, 2025.

Stationary sources of noise, including construction equipment, attenuate at a rate of approximately 6.0 dB per doubling of distance from the source depending on ground absorption. Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, increase the efficacy of noise attenuation that occurs by distance alone. Widely distributed

noises, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate.

Surrounding Land Uses and Existing Sensitive Receptors

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise-sensitive biological species, although most jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include residential uses to the west and south of the project site.

Existing Ambient Noise Environment

The existing ambient noise environment in the project vicinity is primarily defined by traffic on East Covell Boulevard. To quantify the existing ambient noise environment in the project vicinity, Saxelby conducted continuous (24-hour) noise level measurements at two locations on the project site, as shown in Figure 4.10-1. The sound level meters were programmed to record the maximum, median, and average noise levels at each measurement location during the survey. The maximum value, denoted as L_{max}, represents the highest noise level measured. The average value, denoted as L_{eq}, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted as L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period. A summary of the noise level measurement survey results is provided in Table 4.10-2.

Table 4.10-2
Existing Background Noise Measurement Data

Location	Date	L_{dn}	Daytime L_{eq}	Daytime L_{50}	Daytime L_{max}	Nighttime L_{eq}	Nighttime L_{50}	Nighttime L_{max}
LT-1	April 5, 2025	62	61	58	77	54	43	72
	April 6, 2025	62	61	57	79	54	45	73
	April 7, 2025	63	62	59	78	54	45	71
	Average	**63**	**61**	**58**	**78**	**54**	**44**	**72**
LT-2	April 5, 2025	46	42	38	60	39	37	54
	April 6, 2025	48	45	41	62	40	39	53
	April 7, 2025	50	48	42	63	42	40	56
	Average	**48**	**45**	**40**	**62**	**40**	**38**	**54**

Notes:
- All values are shown in dBA.
- Daytime hours: 7:00 AM to 10:00 PM.
- Nighttime hours: 10:00 PM to 7:00 AM, pursuant to the definition of L_{dn} and the industry standard. City of Davis Municipal Code Section 24.02.020, Noise limits, defines nighttime hours as 9:00 PM to 7:00 AM.

Source: Saxelby Acoustics, LLC, 2025.

Figure 4.10-1
Noise Measurement Locations



Source: Saxelby Acoustics, LLC, 2025.

*Figure not OCR compatible.

Existing Traffic Noise Levels

The Federal Highway Administration (FHWA) Traffic Noise Model (FHWA-RD-77-108) was used to calculate existing noise levels due to traffic, expressed in L_{dn}, for roadways within the project vicinity. The approach used to evaluate existing traffic noise levels is discussed in the Method of Analysis section of this chapter. Traffic data for existing conditions were obtained from the transportation consultant, Fehr & Peers.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project vicinity roadway segment, as summarized in Table 4.10-3. In some locations, sensitive receptors may not receive full shielding from noise barriers or may be located at distances which vary from the assumed calculation distance.

Table 4.10-3
Existing Traffic Noise Levels

Roadway	Segment	Existing Exterior Noise Level (dBA L_{dn}) at Closest Sensitive Receptors
Alhambra Drive	South of East Covell Boulevard	48.7
Alhambra Drive	West of Mace Boulevard	57.3
East Covell Boulevard	West of Market Avenue	65.9
East Covell Boulevard	East of Cannery Avenue	60.3
East Covell Boulevard	East of Pole Line Road	62.4
East Covell Boulevard	West of Baywood Lane	60.8
East Covell Boulevard	West of Manzanita Lane	60.7
East Covell Boulevard	West of Wright Boulevard	61.8
East Covell Boulevard	West of Monarch Lane	63.4
East Covell Boulevard	East of Alhambra Drive	56.8
East Covell Boulevard	West of Alhambra Drive	58.4
Pole Line Road	South of East Covell Boulevard	60.3
Pole Line Road	North of Picasso Avenue	63.4
Pole Line Road	North of Donner Avenue	64.4
Pole Line Road	North of Moore Boulevard	66.9

Source: Saxelby Acoustics, LLC, 2025.

Fundamentals of Vibration

Vibration is similar to noise in that both involve a source, a transmission path, and a receiver. However, while noise is generally considered to be pressure waves transmitted through air, vibration is usually associated with transmission through the ground or structures. As with noise, vibration consists of an amplitude and frequency. A person's response to vibration depends on their individual sensitivity, as well as the amplitude and frequency of the source.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of velocity in inches per second (in/sec) peak particle velocity (PPV) or root-mean-square (VdB, RMS). Standards pertaining to perception, as well as damage to structures, have been developed for vibration in terms of PPV and RMS velocities. As vibrations travel outward from the source, they excite the particles of rock and soil through which they pass and cause them to oscillate. Differences in subsurface geologic conditions and distance from the source of vibration result in different vibration levels characterized by different frequencies and intensities. In all cases, vibration amplitudes decrease with increasing distance.

Human response to vibration is difficult to quantify. Vibration can be felt or heard well below the levels that produce any damage to structures. The duration of the event has an effect on human response, as does frequency. Generally, as the duration and vibration frequency increase, the potential for adverse human response increases. Operation of construction equipment and construction techniques generate ground vibration. Roadway traffic can also be a source of such vibration. At high enough amplitudes, ground vibration has the potential to damage structures and/or cause cosmetic damage. However, traffic rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.

Existing Ambient Vibration Environment

Sources of substantial ground vibration do not occur in the project vicinity. The existing vibration levels within the project site are below the threshold of perception.

4.10.3 REGULATORY CONTEXT

In order to limit exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. Applicable federal laws or regulations pertaining to noise or vibration that would directly apply to the proposed project do not exist. The following provides a general overview of the existing State and local regulations that are relevant to the proposed project.

State Regulations

The following are the State environmental laws and policies relevant to noise and vibration.

California Building Code

The California Building Code (Title 24, Part 2 of the California Code of Regulations [CCR]) establishes uniform minimum noise insulation performance standards to protect persons within new buildings that house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings.

Title 24 mandates that interior noise levels attributable to exterior sources cannot exceed 45 dB L_{dn} or CNEL in any habitable room. Title 24 also requires that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior levels. If the allowable interior noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local Regulations

The following are the local environmental goals and policies relevant to noise and vibration.

City of Davis General Plan

The following goals and policies from the City's General Plan related to noise and vibration are applicable to the proposed project.

Noise Chapter

Goal NOISE 1 Maintain community noise levels that meet health guidelines and allow for a high quality of life.

Policy NOISE 1.1 Minimize vehicular and stationary noise sources, and noise emanating from temporary activities.

Standard a The City shall strive to achieve the "normally acceptable" exterior noise levels shown in Table 19 (see Table 4.10-4) and the target interior noise levels in Table 20 (see Table 4.10-5) in future development areas and in currently developed areas.

Table 4.10-4
Exterior Noise Level Standards

Land Use Category	Community Noise Exposure L_{dn} or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Unacceptable	Clearly Unacceptable
Residential	Under 60	60-70[1]	70-75	Above 75
Transient Lodging – Motels, Hotels	Under 60	65-75	75-80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	Under 60	60-70	70-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	Under 50	50-70	N/A	Above 70
Sports Arenas, Outdoor Spectator Sports	N/A	Under 75	N/A	Above 75
Playgrounds, Neighborhood Parks	Under 70	N/A	70-75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Under 70	N/A	70-80	Above 80
Office Buildings, Business Commercial and Professional	Under 65	65-75	Above 75	N/A
Industrial, Manufacturing, Utilities, Agriculture	Under 65	70-80	Above 80	N/A

Normally Acceptable: Specified land use is satisfactory based upon the assumption that all buildings involved are of conventional construction, without special noise insulation requirements.
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is conducted, and needed noise attenuation features are included in the construction or development.
Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be conducted and needed noise attenuation features shall be included in the construction or development.
Clearly Unacceptable: New construction or development shall not be undertaken.
N/A: Not applicable.

[1] The City Council shall have discretion within the "conditionally acceptable" range for residential use to allow noise levels in outdoor spaces to go up to 65 dBA if cost effective or aesthetically acceptable measures are not available to reduce noise levels in outdoor spaces to the "normally acceptable" levels. Outdoor spaces which are designed for visual use only (for example, streetside landscaping in an apartment project), rather than outdoor use space, may be considered acceptable up to 70 dBA.

Source: City of Davis General Plan, Table 19, January 2007.

Table 4.10-5
Standards for Interior Noise Levels

Use	Noise Level (dBA)
Residences, Schools Through Grade 12, Hospitals and Churches	45
Offices	55

Source: City of Davis General Plan, Table 20, January 2007.

Standard b New development shall generally be allowed only in areas where exterior and interior noise levels consistent with Table 19 (see Table 4.10-4) and Table 20 (see Table 4.10-5) can be achieved.

Standard c New development and changes in use shall generally be allowed only if they will not adversely impact attainment within the community of the exterior and interior noise standards shown in Table 19 (see Table 4.10-4) and Table 20 (see Table 4.10-5). Cumulative and project specific impacts by new development on existing residential land uses shall be mitigated consistent with the standards in Table 19 (see Table 4.10-4) and Table 20 (see Table 4.10-5).

Standard d Required noise mitigation measures for new and existing housing shall be provided with the first stage and prior to completion of new developments or the completion of capacity-enhancing roadway changes wherever noise levels currently exceed or are projected within 5 years to exceed the normally acceptable exterior noise levels in Table 19 (see Table 4.10-4).

Policy NOISE 1.2 Discourage the use of sound walls whenever alternative mitigation measures are feasible, while also facilitating the construction of sound walls where desired by the neighborhood and there is no other way to reduce noise to acceptable exterior levels shown in Table 19 (see Table 4.10-4).

Standard c Review sound walls and other noise mitigations through the design review process.

Goal NOISE 2 Provide for indoor noise environments that are conducive to living and working.

Policy NOISE 2.1 Take all technically feasible steps to ensure that interior noise levels can be maintained at the levels shown in Table 20 (see Table 4.10-5).

Standard a New residential development or construction shall include noise attenuation measures necessary to achieve acceptable interior noise levels shown in Table 20 (see Table 4.10-5).

Standard b Existing areas that will be subjected to noise levels greater than the acceptable noise levels shown in Table 20 (see Table 4.10-5) as a result of increased traffic on existing city streets (including streets remaining in existing configurations and streets being widened) shall be mitigated to the acceptable levels in Table 20 (see Table 4.10-5). If traffic increases are caused by specific projects, then the City shall be the lead agency in implementing cumulative noise mitigation projects. Project applicants shall pay their fair share for any mitigation.

City of Davis Noise Ordinance

The Davis Municipal Code establishes noise level limits that are applicable to on-site project-generated noise sources that would affect existing or proposed sensitive receptors. According to Section 24.02.020 of the Davis Municipal Code, a person shall not produce, suffer, or allow to be produced on any public or private property, sounds at a level in excess of those shown below in Table 4.10-6, when measured at a property's plane or, if on any street or highway, measured at the property plane of the nearest property.

Davis Municipal Code Section 24.02.030 prohibits the production of a noise level of more than 20 dBA above the limit provided in Table 4.10-6, but not greater than 80 dBA measured at the property plane, which constitutes an absolute noise limitation. Therefore, the City's maximum noise limit is 75 dBA L_{max} for the hours of 7:00 AM to 9:00 PM and 70 dBA L_{max} during the hours of 9:00 PM to 7:00 AM.

Table 4.10-6
City of Davis Municipal Code Exterior Noise Standards

Land Use	Time Period	Maximum Noise Level (dBA)
Residential	9:00 PM to 7:00 AM	50
	7:00 AM to 9:00 PM	55
Commercial/Industrial/Core Commercial	10:00 PM to 7:00 AM	55
	7:00 AM to 10:00 PM	60
High Noise Traffic Corridor	Anytime	65

Source: Davis Municipal Code, 2024.

Additionally, Davis Municipal Code Section 24.02.040 contains special provisions which apply to noise generated by construction-related activities. The pertinent components of the section are provided below.

> (a) Power tools. The operation of power tools for noncommercial purposes shall be exempt from the provisions of Sections 24.02.020(a), (b), (c) and 24.02.030, between the hours of 8:00 a.m. and 8:00 p.m.; provided, that such operations shall be subject to the provisions of Section 24.05.010. For purposes of this section, a noncommercial use shall be a use for which a business license is not required pursuant to Chapter 19.
> (b) Construction and landscape maintenance equipment. Notwithstanding any other provision of this chapter, between the hours of 7:00 a.m. and 7:00 p.m. on Mondays through Fridays, and between the hours of 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays, construction, alteration, repair or maintenance activities which are authorized by valid city permit or business license, or carried out by employees of contractors of the city shall be allowed if they meet at least one of the following noise limitations:
> (1) No individual piece of equipment shall produce a noise level exceeding eighty-three dBA at a distance of twenty-five feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to twenty feet from the equipment as possible.
> (2) The noise level at any point outside of the property plane of the project shall not exceed eighty-six dBA.
> (3) The provisions of subdivisions (1) and (2) of this subsection shall not be applicable to impact tools and equipment; provided, that such impact tools and equipment shall have intake and exhaust mufflers recommended by manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation, and that pavement breakers and jack-hammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the director of public works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendations, the director of public works may prescribe such means of accomplishing maximum noise attenuation as he or she may determine to be in the public interest.
>
> Construction projects located more than two hundred feet from existing homes may request a special use permit to begin work at 6:00 a.m. on weekdays from June 15th until September 1st. No percussion type tools (such as ramsets or jackhammers) can be used before 7:00 a.m. The permit shall be revoked if any noise complaint is received by the police department.

4.10.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to noise and vibration. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Impacts of the environment on a project (as opposed to impacts of a project on the environment) are beyond the scope of required CEQA review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles,* [2011] 201 Cal.App.4th 455, 473 [*Ballona*]). The California Supreme Court has held that "CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future users or residents. What CEQA does mandate is an analysis of how a project might exacerbate

existing environmental hazards." (*California Building Industry Assn. v. Bay Area Air Quality Management Dist.* [2015] 62 Cal.4th 369, 392; see also *Mission Bay Alliance v. Office of Community Investment & Infrastructure* [2016] 6 Cal.App.5th 160, 197 ["identifying the effects on the project and its users of locating the project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes"], quoting *Ballona*, *supra*, 201 Cal.App.4th at p. 474). Therefore, for the purposes of the CEQA analysis, the relevant inquiry is not whether the future residents of the proposed project will be exposed to pre-existing environmental noise-related hazards, but instead whether project-generated noise would exacerbate the pre-existing conditions.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, an impact related to noise is considered significant if the proposed project would result in any of the following:

- 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;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- 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 (see Chapter 5, Effects Not Found to be Significant).

As noted above, issues related to whether the proposed project would result in the following impact are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- 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.

Summary of Applicable Noise Standards

Applicable noise level standards from the City's General Plan and the City of Davis Municipal Code are summarized below.

Construction Noise Criteria

Pursuant to Davis Municipal Code Section 24.02.040, sound or noise emanating from construction activities is exempt from the City's noise regulations, provided that construction occurs between the hours of 7:00 AM to 7:00 PM on Monday through Friday and between the hours of 8:00 AM to 8:00 PM on Saturdays and Sundays, as well as meets at least one of the following noise limitations:

- None of the construction equipment generates noise levels exceeding 83 dBA at a distance of 25 feet;
- The noise level at any point outside of the property plane of the construction site does not exceed 86 dBA;
- The construction tools are impact tools and/or equipment that have manufacturer-recommended intake and exhaust mufflers and are approved by the Director of Public Works/Director of Community Development as having the best-accomplishing noise

attenuation. Pavement breakers and jack hammers must also be equipped with acoustically attenuating shields or shrouds recommended by manufacturers and approved by the Director of Public Works/Director of Community Development as having the best-accomplishing noise attenuation;

- Individual powered blowers do not produce a noise level exceeding 70 dBA measured at a distance of 50 feet;
    - On a single-family residential property, the 70 dBA at 50 feet restriction does not apply, if operated for less than 10 minutes per occurrence; and
- Powered blowers are not simultaneously operated within a 100-foot radius of another powered blower.

The City has not adopted any formal standard for evaluating temporary construction noise which occurs within allowable hours. For short-term noise associated with project construction, the City has elected to use an increase criteria of five dBA, applied to existing residential receptors in the project vicinity.

Transportation Source Noise Criteria

The City of Davis does not have a specific threshold for evaluating noise increases due to transportation sources. Therefore, the Federal Interagency Committee on Noise (FICON) substantial increase criteria, discussed further below, is used to evaluate impacts related to traffic noise.

The following table was developed by FICON as a means of developing thresholds for identifying project-related noise-level increases. The rationale for the graduated scales is that test subjects' reactions to increases in noise levels varied depending on the starting level of noise. Specifically, with lower ambient noise environments, such as those below 60 dB L_{dn}, a larger increase in noise levels was required to achieve a negative reaction than was necessary in environments where noise levels were already elevated. Therefore, because the City does not have defined thresholds for what would be considered a substantial increase in traffic noise levels, information from Table 4.10-7 is used.

Table 4.10-7
Significance of Changes in Cumulative Noise Exposure (dB L_{dn})

Ambient Noise Level Without Project	Increase Required for Significant Impact
<60	+5.0 or more
60 to 65	+3.0 or more
>65	+1.5 or more

Source: Federal Interagency Committee on Noise.

The use of the FICON standards is considered conservative relative to thresholds used by other agencies in the State. For example, Caltrans requires a project-related traffic noise-level increase of 12 dB for a finding of significance, and the California Energy Commission (CEC) considers project-related noise-level increases between five to 10 dB significant, depending on local factors. Therefore, the use of the FICON standards, which set the threshold for finding of significant noise impacts as low as 1.5 dB, provides a conservative approach to impact assessment for the proposed project.

Non-Transportation Source Noise Criteria

Davis Municipal Code Section 24.02.020 establishes exterior noise standards at residential uses of 50 dBA L_{max} between the hours of 9:00 PM to 7:00 AM, and 55 dBA L_{max} between the hours of 7:00 AM to 9:00 PM. Section 24.02.030 establishes that the City's maximum noise limit is 75 dBA L_{max} for the hours of 7:00 AM to 9:00 PM and 70 dBA L_{max} during the hours of 9:00 PM to 7:00 AM. The City of Davis General Plan establishes a day/night average noise-level threshold of 60 dBA L_{dn} within outdoor activity areas of residential land uses.

Vibration

The City of Davis does not have specific policies or standards pertaining to vibration levels. However, vibration levels associated with construction activities and project operations are addressed as potential vibration impacts associated with project implementation. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events.

Construction operations have the potential to result in varying degrees of temporary ground vibration depending on the specific construction equipment used and operations involved. Table 4.10-8 indicates that pursuant to Caltrans standards, the threshold for architectural damage to structures is 0.2 PPV in inches per second (in/sec PPV) and continuous vibrations of 0.1 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

Table 4.10-8
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 - 0.30	0.006 - 0.019	Threshold of perception; possibility of intrusion.	Vibrations unlikely to cause damage of any type.
2.0	0.08	Vibrations readily perceptible.	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected.
2.5	0.10	Level at which continuous vibrations begin to annoy people.	Virtually no risk of "architectural" damage to normal buildings.
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations).	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage.
10 - 15	0.4 - 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

Source: California Department of Transportation, 2002.

Method of Analysis

Below are descriptions of the methodologies used in the Noise Assessment (see Appendix P of this EIR) to measure temporary construction noise, existing and cumulative traffic noise levels,

with and without the proposed project, as well as project operational noise. Further calculations are provided in Appendix P of this EIR.

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the ambient noise-level measurement survey. The meters were calibrated before and after use with an LDL CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

To assess noise impacts due to temporary noise, Saxelby used the FHWA Roadway Construction Model (RCNM) to predict noise levels for standard construction equipment used for roadway improvement projects. The assessment of potential significant noise effects due to construction is based on the standards and procedures described in the Federal Transit Authority (FTA) guidance manual and FHWA's RCNM. The RCNM is a noise prediction model that enables the prediction of construction noise levels for a variety of construction equipment based on a compilation of empirical data and the application of acoustical propagation formulas. The model enables the calculation of construction noise levels in more detail than manual methods, which eliminates the need to collect extensive amounts of project-specific input data. RCNM allows for the modeling of multiple pieces of construction equipment working either independently or simultaneously, the character of noise emission, and the usage factors for each piece of equipment.

Construction noise varies depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week), and the duration of the construction work. Noise sources in the RCNM database include actual noise levels and equipment usage percentages. This source data was used in this construction noise analysis.

Saxelby analyzed potential future construction noise associated with the proposed project using data compiled for various pieces of construction equipment at a distance of 50 feet inside the boundary of each component of the proposed project. Similarly, construction vibration was analyzed using data compiled for various pieces of equipment at a distance of 25, 50, and 100 feet.

To assess noise impacts due to traffic increases on the local roadway network associated with development of the proposed project, traffic noise levels were predicted at sensitive receptors for existing and cumulative conditions, both with and without the proposed project. Existing and cumulative noise levels due to traffic were calculated using the FHWA-RD-77-108 noise prediction model. The model is based upon the Calveno reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, for comparison to the City's General Plan exterior noise standards, the input volume was adjusted to account for the day/night distribution of traffic.

Project trip generation volumes were based upon those provided for the proposed project by Fehr & Peers. Truck usage and vehicle speeds on the local area roadways were estimated from field observations. The predicted increases in traffic noise on the local roadway network for existing and cumulative conditions resulting from the proposed project are provided in terms of L_{dn}.

Traffic noise levels were predicted at sensitive receptors at the closest typical setback distance along each project-area roadway segment. In some locations, sensitive receptors may not receive full shielding from noise barriers or may be located at distances which vary from the assumed calculation distance.

To assess noise impacts due to project operational noise, Saxelby modeled the proposed stationary noise-generating components that could affect existing neighboring residential uses, including the proposed Community Park, neighborhood retail, gym/classroom building, Mini Park, fire station, and high density residential uses.

Saxelby used the SoundPLAN noise-prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors. The predictions were made in accordance with International Organization for Standardization (ISO) Standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation.

The following is a list of assumptions used for the operational noise modeling.

- Community Park: Based upon the available plans, the park is anticipated to include a jungle gym play area, dog parks, two softball fields, one soccer field, and six pickleball courts. Based upon data collected at existing parks, a jungle gym would generate levels of 55 dBA L_{max} at a distance of 65 feet to the center. The small and large dog parks were predicted to generate 52 dBA L_{eq} and 73 dBA L_{max} at 15 feet to the edge. A softball or baseball game was predicted to generate up to 54 dBA L_{eq} and 67 dBA L_{max} at a distance of 150 feet from the edge of the field, which includes noise emanating from gameplay, players, and spectators. A soccer game was predicted to generate 58 dBA L_{eq} and 76 dBA L_{max} as measured 200 feet from the center of the field based upon measurements of youth tournament games. Pickleball gameplay was predicted to generate 56 dBA L_{eq} at 25 feet to the side of a court and 61 dBA L_{eq} at 25 feet to the end of a court. Pickleball was predicted to generate maximum noise levels of up to 90 dBA L_{max} at 25 feet to the end of a court. The pickleball noise level is based on the more conservative use of the fast sound meter response which measures sound every 125 milliseconds (ms), whereas the City's noise ordinance uses slow (one-second) sound meter response. The use of fast response results in higher measured sound levels versus slow response and is therefore more conservative than that allowed by the City. All amenities were modeled as operating continuously during daytime hours.

  The Community Park would also include a parking lot. The parking lot was assumed to fill or empty in a busy hour for a total of approximately 250 vehicle movements during a peak hour of use. One heavy vehicle movement was included to account for garbage collection or deliveries to the neighborhood retail amenities. Parking lot movements were predicted to generate 71 dBA SEL at 50 feet for passenger vehicles and 85 dBA SEL at 50 feet for heavy trucks. Typical maximum noise levels due to car startups or car doors closing were predicted to be 74 dBA L_{max} at 15 feet. Nighttime traffic was assumed to be 25 percent of daytime peak hour volumes to account for trips to the neighborhood retail amenities.

- Neighborhood Retail: The proposed project would include approximately 1.5 acres of neighborhood retail space north of the proposed transit station. The commercial space would be up to 5,000 square feet (sf) in size and could include uses such as food and

beverage sales. The primary noise source associated with the retail uses would be vehicle trips. The retail uses would share a parking lot with the Community Park. Vehicle circulation noise is analyzed under the Community Park analysis. Additional noise sources could include mechanical equipment such as packaged heating, ventilation, and air conditioning (HVAC) units, chiller condensers, and rooftop grease vents. Saxelby Acoustics assumed that the retail buildings would be serviced by up to three 10-ton HVAC units. Pursuant to manufacturer data, typical units of such size have a sound rating of 88 dBA. Maximum noise levels were predicted to be approximately equal to average sound levels. The mechanical equipment was assumed to run continuously during daytime hours and at 25 percent capacity during nighttime hours.

- Gym/Classroom Building: A 9,500-sf gym/classroom building would be located in the central portion of the Community Park and would support indoor recreation opportunities such as basketball, futsal, and enrichment programs. Saxelby Acoustics assumed that the building would be serviced by up to three 10-ton HVAC units. Pursuant to manufacturer data, typical units of such size have a sound rating of 88 dBA. Maximum noise levels were predicted to be approximately equal to average sound levels. The mechanical equipment was assumed to run continuously during daytime hours and at 25 percent capacity during nighttime hours.

- Mini Park: The proposed project would include a Mini Park with a jungle gym area in the northern portion of the project site. Based on previously collected data, jungle gyms are predicted to produce 55 dBA L_{eq} and 67 dBA L_{max} at 65 feet to the center of the play area during a peak hour of use.

- Fire Station: The Davis Fire Department (DFD) has also identified the potential need for a 2.0-acre fire station in the northeastern portion of the City. In the event that the facility is not accommodated elsewhere, the proposed project has reserved land to accommodate the fire station on the southwestern HDR parcel, adjacent to East Covell Boulevard. The new fire station would ultimately be designed and implemented by the DFD, but could consist of a four-bay fire station and a small space to support police personnel. The fire station would have a dedicated entry and exit onto East Covell Boulevard.

  To assess noise generated by the potential fire station on the project site, Saxelby assumed an average of four events on the fire station site during a peak hour. Parking lot movement for heavy trucks such as a fire engine is predicted to generate an SEL of 85 dBA at 50 feet. Four trips per hour are assumed to occur during either daytime or nighttime hours. Based on field observations of similar facilities, siren noise occurs off-site and is considered exempt under Davis Municipal Code Section 24.02.040(e), which states that "Aural warning devices which are required by law to protect the health, safety and welfare of the community shall be exempt from the provisions of this chapter."

- High Density Residential Uses: The proposed project would include the development of up to 538 high-density residential (HDR) units. Noise sources associated with HDR uses would include vehicle circulation and HVAC noise. Each residential unit was assumed to be serviced by one mini-split condensing unit (64 dBA). Sound level data was obtained from manufacturer data for similar units. Saxelby Acoustics assumed that each residential unit would generate one vehicle movement in the peak hour. Two heavy vehicle trips were included to account for garbage collection or deliveries. Parking lot movements were

predicted to generate an SEL of 71 dBA SEL at 50 feet for passenger vehicles and 85 dBA SEL at 50 feet for heavy trucks. Typical maximum noise levels due to car startups or car doors closing were predicted to be 74 dBA L_{max} at 15 feet.

The HDR parcel is also proposed to include a daycare facility. The proposed daycare facility would be included within the HDR parcel, centrally located between the two affordable housing areas. The proposed daycare would include an approximately 6,300-sf building and 2,700-sf outdoor play area. Based on previously collected data, outdoor play areas typically produce up to 55 dBA L_{eq} and 67 dBA L_{max} at 65 feet to the center of the play area during a peak hour of use. The proposed daycare facility was assumed to be serviced by a 10-ton packaged HVAC unit (88 dBA). Sound level data was obtained from manufacturer data for similar units.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the baseline and standards of significance identified above.

4.10-1 Generation of a substantial temporary 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. Based on the analysis below, even with implementation of mitigation, the impact is *significant and unavoidable*.

During construction of the proposed project, heavy equipment would be used for site preparation, grading, building construction, paving, architectural coating, and utility installation, all of which would temporarily increase ambient noise levels when in use. Noise levels would vary depending on the type and operation of equipment and how well the equipment is maintained. Noise exposure at any single point outside the project site would also vary depending on the distance from the source. As shown below in Table 4.10-9, activities involved in construction would generate average noise levels of up to 88 dBA L_{eq} at 50 feet from the center of activity and maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet from the center of activity. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

The Davis Municipal Code makes exemptions for certain typical activities that may occur within the City. The exemptions that apply to construction are listed in Davis Municipal Code Article 24.02.040, Special Provisions. The most restrictive standard would be the requirement that construction equipment does not exceed 83 dBA at a distance of 25 feet or 86 dBA at the property plane.

Based on the noise levels shown in Table 4.10-9, construction noise levels associated with the proposed project would comply with the Davis Municipal Code through the implementation of the strategies contained in the City's Noise Ordinance (see Mitigation Measure 4.10-1 below).

Table 4.10-9
Construction Equipment Noise Levels

Equipment	Quantity	Usage (Percent)	Maximum Noise Level at 25 Feet (dBA L_{max})	Maximum Noise Level at 50 Feet (dBA L_{max})	Hourly Average Noise Level at 50 Feet (dBA L_{eq})
Site Preparation					
Dozer	3	40	88	82	83
Tractor/Loader/Backhoe	4	40	90	84	86
Total	--	--	--	--	**88**
Grading					
Excavator	3	40	87	81	82
Grader	1	40	91	85	81
Dozer	2	40	88	82	81
Scraper	2	40	90	84	83
Tractor/Loader/Backhoe	2	40	90	84	83
Dump Truck	1	40	82	76	72
Total	--	--	--	--	**88**
Building Construction					
Crane	1	16	97	81	73
Fork Lift	3	40	89	83	84
Generator	1	50	87	81	78
Tractor/Loader/Backhoe	3	40	90	84	85
Welder/Torch	1	40	80	74	70
Total	--	--	--	--	**88**
Paving					
Paver	2	50	83	77	77
Paving Equipment	2	50	83	77	77
Roller	2	20	86	80	76
Total	--	--	--	--	**81**
Architectural Coating					
Air Compressor	1	40	85	79	75
Total	--	--	--	--	**75**

Source: Saxelby Acoustics, LLC, 2025.

Specifically, to comply with the requirement of 83 dBA at a distance of 25 feet, the proposed project would be required to employ sound-control devices on equipment, muffled exhausts on equipment, and install acoustic barriers around stationary equipment that block line-of-sight to the equipment. According to Saxelby, noise levels outside of the project site boundaries would not exceed 86 dBA.

Notwithstanding, Appendix G of the CEQA Guidelines (Section XIII, question 'a') requires a lead agency to determine if a project would result in the generation of a substantial temporary increase in ambient noise levels. In terms of determining the

temporary noise increase due to project-related construction activities, as previously discussed, an impact would occur if construction activities would noticeably increase ambient noise levels by five dBA or more over existing ambient noise levels.

Table 4.10-10 provides the predicted noise levels at the nearest sensitive receptor to each component of the proposed project, based on the construction of each of the Large Lot Parcels of the proposed project. As shown therein, construction of the proposed project is predicted to generate noise-level increases over ambient conditions greater than five dB. To reduce the increases, Saxelby recommends the use of eight-foot-tall temporary noise barriers at the boundary of the construction area adjacent to the residential uses (see Figure 4.10-2). The residential uses to the south would not benefit from use of temporary noise barriers, as the residences are already shielded by existing sound walls.

As further discussed below, use of temporary sound barriers during construction would not reduce all ambient noise increases below five dB at the receptor locations.

Noise would also be generated during the construction phase by increased truck traffic on area roadways, including truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur only during daytime hours.

Based on the above, worst-case, maximum noise levels associated with construction activities would result in a significant noise-level increase at the nearest sensitive receptors. Therefore, the proposed project would generate a substantial temporary increase in ambient noise levels in the project vicinity in excess of standards established in the Davis General Plan or Noise Ordinance, or applicable standards of other agencies, and a ***significant*** impact could occur.

Mitigation Measure(s)

As discussed above, Saxelby recommends the use of an eight-foot-tall temporary noise barrier in order to reduce temporary construction noise levels at the nearest residential receptors. The resulting noise levels are listed in Table 4.10-11 below.

As shown in the table, the temporary barrier would reduce construction noise levels associated with three construction areas to below the applicable significant increase criteria of five dBA. However, construction noise associated with the majority of construction areas would remain over the five dBA increase criteria. Therefore, although implementation of the following mitigation measure would reduce the above significant impact, the impact would remain *significant and unavoidable.*

4.10-1 *Prior to the approval of grading and/or building permits, the following requirements shall be noted on improvement plans, subject to review and approval by the City of Davis Community Development Department:*

- *The proposed project shall incorporate an eight-foot-tall temporary sound barrier between the existing sensitive receptors to the west and construction activities, as determined*

by a qualified acoustical consultant prior to commencement of construction (reference locations in Figure 4.10-2 of the Willowgrove EIR).

- *The sound barrier fencing shall consist of 0.5-inch plywood or minimum Sound Transmission Class (STC) 27 sound curtains placed to shield nearby sensitive receptors. The barrier would be placed along the west boundary of large lot parcels S-4, S-5, and 600 feet along the west side of S-9, as measured from the northwest corner of S-9, unless the easterly Palomino Place residences are developed and occupied prior to Willowgrove construction, in which case the barrier shall extend along the entirety of S-9. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance. The noise barrier shall stay in place through the construction of buildings on Large Lot Parcels S-4, S-5, and S-9, after which time they may be removed as buildings on the parcels would provide equivalent shielding;*
- *Construction activities shall only take place between the hours of 7:00 AM and 7:00 PM, Monday through Friday, and 8:00 AM and 8:00 PM, on Saturday;*
- *All construction equipment powered by internal-combustion engines shall be properly muffled and maintained;*
- *Quiet construction equipment, particularly air compressors, are to be selected whenever possible;*
- *All stationary noise-generating construction equipment, such as generators or air compressors, are to be located as far as practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest to the project site;*
- *Unnecessary idling of internal-combustion engines is prohibited; and*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest to the project site during all project construction.*

Table 4.10-10
Construction Noise at Existing Sensitive Receptors

Project Area[1]	Distance to Sensitive Receptors (feet)	Representative Noise Receptor	Existing Ambient (dBA L_{eq})	Construction Noise Level (dBA L_{eq})	Existing Plus Construction (dBA L_{eq})	Increase Over Ambient (dBA)	Exceeds 5.0 dB?
S-1	2,100	LT-2 (West)	48.1	55.8	56.5	**8.4**	Yes
S-2	1,500	LT-2 (West)	48.1	58.7	59.1	**11.0**	Yes
S-3	850	LT-2 (West)	48.1	63.6	63.7	**15.6**	Yes
S-4	225	LT-2 (West)	48.1	75.2	75.2	**27.1**	Yes
S-5	225	LT-2 (West)	48.1	75.2	75.2	**27.1**	Yes
S-6	830	LT-2 (West)	48.1	63.8	63.9	**15.8**	Yes
S-7	1,500	LT-2 (West)	48.1	58.7	59.1	**11.0**	Yes
S-8	2,100	LT-2 (West)	48.1	55.8	56.5	**8.4**	Yes
S-9	200	LT-2 (West)	48.1	76.2	76.2	**28.1**	Yes
S-10	830	LT-2 (West)	48.1	63.8	63.9	**15.8**	Yes
S-11	1,500	LT-2 (West)	48.1	58.7	59.1	**11.0**	Yes
S-12	1,250	LT-1 (South)	57.3	55.3	59.4	2.1	No
S-13	650	LT-1 (South)	57.3	61.0	62.5	**5.2**	Yes
S-14	750	LT-1 (South)	57.3	59.7	61.7	4.4	No
S-15	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-16	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-17	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-18	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-19	290	LT-1 (South)	57.3	68.0	68.3	**11.0**	Yes
S-20	1,300	LT-2 (West)	48.1	59.9	60.2	**12.1**	Yes

[1] Project area corresponds to the labeling shown on Figure 4.10-2.

Source: Saxelby Acoustics, LLC, 2025.

Figure 4.10-2
Temporary Construction Noise Barrier



*Figure not OCR compatible.

Table 4.10-11
Construction Noise at Existing Sensitive Receptors With Temporary Barrier

Project Area[1]	Distance to Sensitive Receptors (feet)	Representative Noise Receptor	Existing Ambient (dBA L_{eq})	Construction Noise Level (dBA L_{eq})	Existing Plus Construction (dBA L_{eq})	Increase Over Ambient (dBA)	Exceeds 5.0 dB?
S-1	2,100	LT-2 (West)	48.1	50.8	52.6	4.5	No
S-2	1,500	LT-2 (West)	48.1	53.7	54.7	**6.6**	Yes
S-3	850	LT-2 (West)	48.1	58.6	59.0	**10.9**	Yes
S-4	225	LT-2 (West)	48.1	70.2	70.2	**22.1**	Yes
S-5	225	LT-2 (West)	48.1	70.2	70.2	**22.1**	Yes
S-6	830	LT-2 (West)	48.1	58.8	59.2	**11.1**	Yes
S-7	1,500	LT-2 (West)	48.1	53.7	54.7	**6.6**	Yes
S-8	2,100	LT-2 (West)	48.1	50.8	52.6	4.5	No
S-9	200	LT-2 (West)	48.1	71.2	71.2	**23.1**	Yes
S-10	830	LT-2 (West)	48.1	58.8	59.2	**11.1**	Yes
S-11	1,500	LT-2 (West)	48.1	53.7	54.7	**6.6**	Yes
S-12	1,250	LT-1 (South)	57.3	55.3	59.4	2.1	No
S-13	650	LT-1 (South)	57.3	61.0	62.5	**5.2**	Yes
S-14	750	LT-1 (South)	57.3	59.7	61.7	4.4	No
S-15	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-16	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-17	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-18	120	LT-1 (South)	57.3	75.6	75.7	**18.4**	Yes
S-19	290	LT-1 (South)	57.3	68.0	68.3	**11.0**	Yes
S-20	1,300	LT-2 (West)	48.1	54.9	55.8	**7.7**	Yes

[1] Project area corresponds to the labeling shown on Figure 4.10-2.

Source: Saxelby Acoustics, LLC, 2025.

4.10-2 Generation of a substantial 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. Based on the analysis below, the impact is *less than significant.*

Residential land uses do not typically generate substantial noise during operations. The primary noise sources associated with the proposed project would be noise associated with increased traffic volumes on the local roadway network and noise associated with the proposed neighborhood retail uses, recreational uses, HDR uses, and the potential fire station, which would be located internally in the project site. An evaluation of future traffic noise levels at existing sensitive receptors in the project vicinity, as well as operational noise levels associated with the proposed project at existing sensitive receptors, is included below.

Traffic Noise at Existing Noise-Sensitive Receptors

Based on information provided by Fehr & Peers and using the methodology described above in the Method of Analysis section, traffic noise levels under Existing and Existing Plus Project conditions were estimated as part of the Noise Assessment and are shown in Table 4.10-12. The estimated noise levels are provided in terms of L_{dn} at the outdoor-activity areas of existing sensitive receptors.

The table also includes an assessment of predicted traffic noise-level increases relative to existing ambient conditions in accordance with the FICON noise-level-increase significance criteria presented in Table 4.10-7.

As shown in Table 4.10-12, the increases in traffic noise levels attributable to the proposed project under Existing Plus Project conditions would be below the applicable FICON increase significance criteria shown in Table 4.10-7. Therefore, the proposed project would not result in a substantial increase in existing traffic noise levels at existing sensitive receptors due to project-generated traffic noise.

Operational Noise at Existing Sensitive Receptors

The Davis Municipal Code establishes maximum noise level standards of 75 dBA L_{max} during daytime hours (7:00 AM to 9:00 PM), 70 dBA L_{max} during nighttime hours (9:00 PM to 7:00 AM). In addition, the City's General Plan Noise Element establishes a day/night average noise-level threshold of 60 dBA L_{dn}.

Figure 4.10-3 shows the L_{max} noise levels resulting from operations of the proposed neighborhood retail, recreational, HDR uses, and the potential fire station, and Figure 4.10-4 shows the L_{dn} noise levels. As shown by Figure 4.10-3 and Figure 4.10-4, the total combined project non-transportation noise sources are predicted to expose nearby residences to maximum noise levels of up to 66 dBA L_{max} and a day/night average noise level of 55 dBA L_{dn}. Therefore, stationary noise sources associated with the proposed project would comply with the City's noise level standards.

The City of Davis General Plan does not establish a significance threshold for increases in stationary noise sources. In the absence of a specific threshold, the FICON criteria was used to assess increases in ambient noise environment.

Table 4.10-12
Predicted Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Predicted Exterior Noise Level at Closest Sensitive Receptors (dBA L_{dn})				Exceeds Threshold?
		Existing	Existing Plus Project	Change	Threshold of Significance	
Alhambra Drive	South of East Covell Boulevard	48.7	50.2	1.5	>60 or +5.0 dB	No
Alhambra Drive	West of Mace Boulevard	57.3	57.4	0.1	>60 or +5.0 dB	No
East Covell Boulevard	West of Market Avenue	65.9	66.5	0.6	+1.5 dB	No
East Covell Boulevard	East of Cannery Avenue	60.3	60.8	0.5	+3.0 dB	No
East Covell Boulevard	East of Pole Line Road	62.4	63.7	1.3	+3.0 dB	No
East Covell Boulevard	West of Baywood Lane	60.8	62.1	1.3	+3.0 dB	No
East Covell Boulevard	West of Manzanita Lane	60.7	62.1	1.4	+3.0 dB	No
East Covell Boulevard	West of Wright Boulevard	61.8	63.2	1.4	+3.0 dB	No
East Covell Boulevard	West of Monarch Lane	63.4	64.7	1.3	+3.0 dB	No
East Covell Boulevard	East of Alhambra Drive	56.8	57.9	1.1	>60 or +5.0 dB	No
East Covell Boulevard	West of Alhambra Drive	58.4	59.7	1.3	>60 or +5.0 dB	No
Pole Line Road	South of East Covell Boulevard	60.3	60.8	0.5	+3.0 dB	No
Pole Line Road	North of Picasso Avenue	63.4	63.5	0.1	+3.0 dB	No
Pole Line Road	North of Donner Avenue	64.4	64.6	0.2	+3.0 dB	No
Pole Line Road	North of Moore Boulevard	66.9	67.1	0.2	+1.5 dB	No

Source: Saxelby Acoustics, LLC, 2025.

Figure 4.10-3
Operational Noise Levels (dBA L_{max})

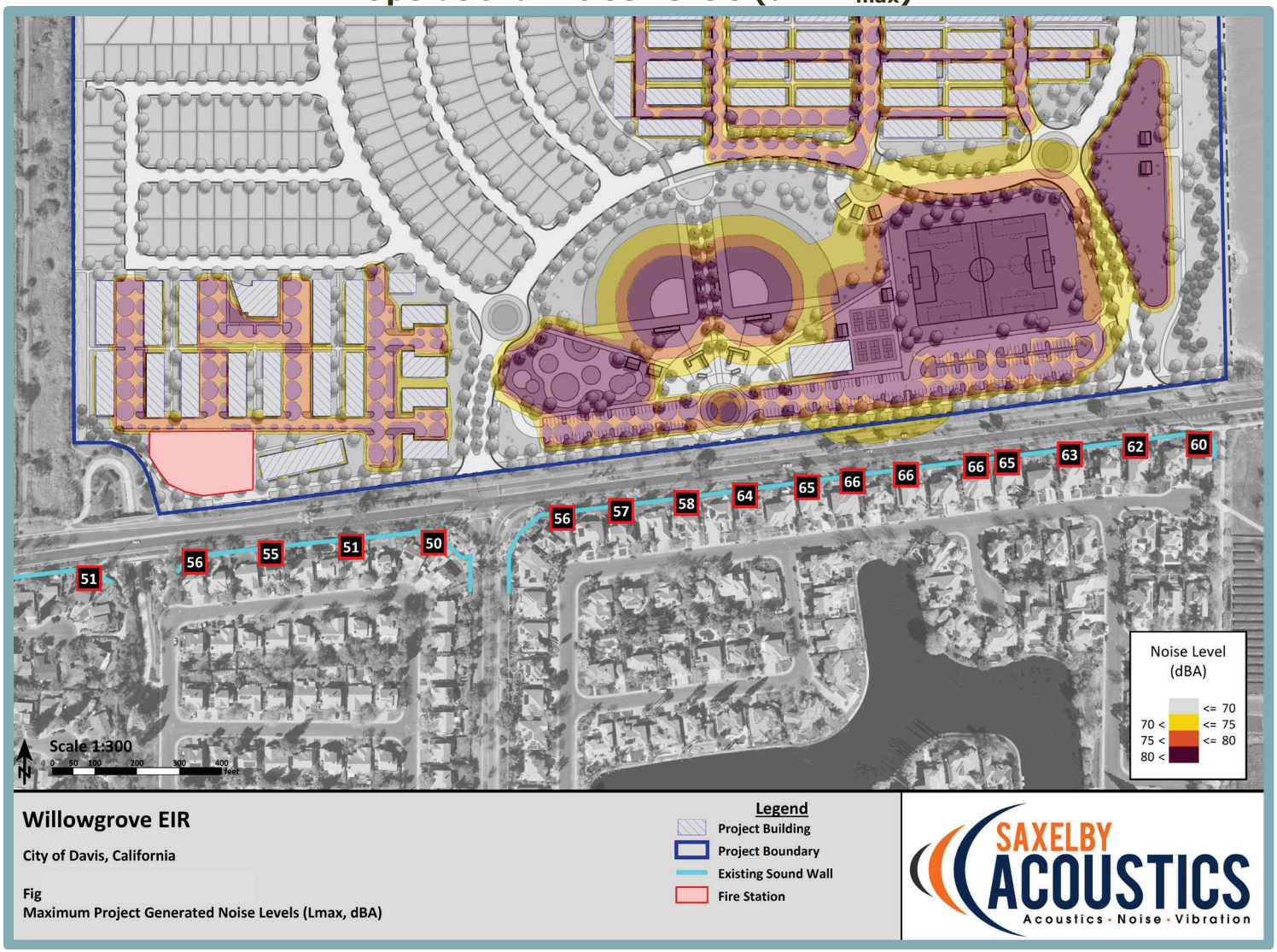


*Figure not OCR compatible.

Figure 4.10-4
Operational Noise Levels (dBA L_{dn})

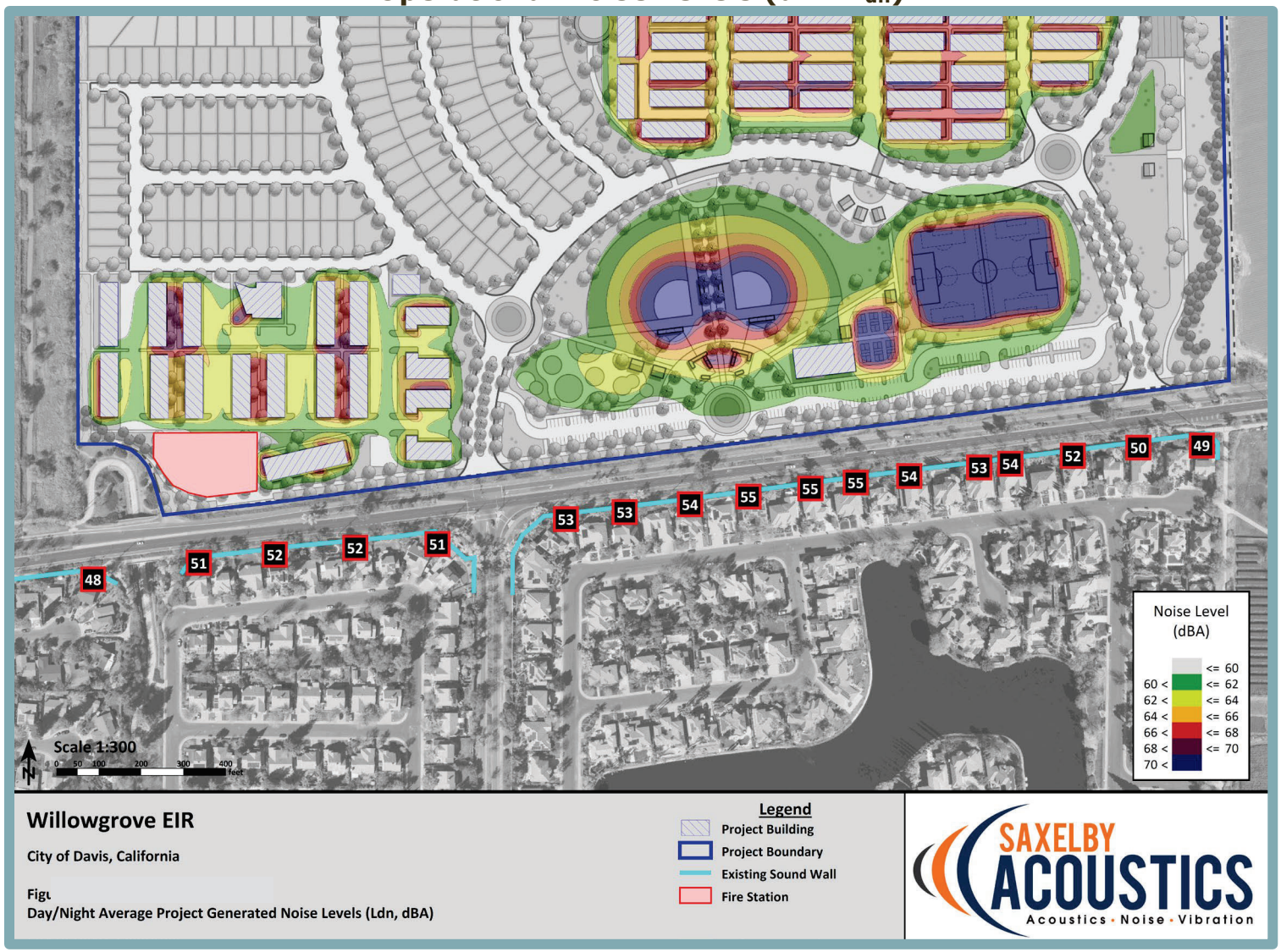


*Figure not OCR compatible.

At the existing residences to the south of the proposed project, the average daytime ambient noise level was measured to be 63 dBA L_{dn} (LT-1) based upon the ambient noise level survey. The existing sound wall along East Covell Boulevard is assumed to reduce existing traffic noise levels by an average of -5 dBA. Therefore, the existing noise levels in the nearest backyards are assumed to be 58 dBA L_{dn}.

Based upon the FICON criteria, an increase of +5.0 dBA or greater would constitute a significant increase where existing noise levels are less than 60 dBA. The resulting sum of ambient noise (58 dBA L_{dn}) plus project generated noise (55 dBA L_{dn}) would be 59.8 dBA L_{dn}. The project generated noise would represent an increase of +1.8 dBA over ambient, which is less than the +5.0 dBA increase criterion. L_{dn} is used herein for comparison pursuant to the City's use of L_{dn} in the General Plan Noise Element standards.

Conclusion

Based on the above, the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the Davis General Plan or Noise Ordinance, or applicable standards of other agencies. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.10-3 Generation of excessive groundborne vibration or groundborne noise levels. Based on the analysis below, the impact is *less than significant*.

Development of the proposed project would primarily consist of a residential community, with other uses including neighborhood services, parks, and public, semi-public, and educational uses. Such uses do not typically involve equipment that generates appreciable vibration during operational activities. Overall, operation of the proposed project would not result in the generation of excessive groundborne vibration or groundborne noise levels.

However, construction activities associated with development of the proposed project would have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Construction would use typical construction equipment and would not require significant sources of vibration such as pile driving or blasting. Table 4.10-13 below shows the vibration levels produced by typical construction equipment.

Table 4.10-13 indicates that construction vibration levels anticipated for typical construction equipment are less than the 0.2 in/sec PPV threshold at a distance of 26 feet. Sensitive receptors which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located further than 26 feet from typical construction activities. At distances greater than 26 feet, construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would occur during normal daytime working hours.

Table 4.10-13
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PAPV at 50 feet (in/sec)	PPV at 100 feet (in/sec)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/Drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/Roller	0.210 (less than 0.2 at 26 feet)	0.074	0.026

Source: Saxelby Acoustics, LLC, 2025.

Based on the above, the proposed project would not result in generation of excessive groundborne vibration or groundborne noise levels, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. For further detail related to the cumulative setting of the proposed project, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.10-4 Generation of a substantial permanent increase in ambient noise levels associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below, the impact is *less than significant*.

Future development projects within the City of Davis would incrementally affect the future cumulative ambient noise environment. Given the primarily residential nature of the proposed project, the primary project component that could combine with noise impacts from surrounding development in the project region would be associated with vehicle traffic generated by development of the project site and other planned development projects, which together, could potentially result in a significant cumulative impact related to transportation noise.

To assess the potential noise impacts due to traffic increases from the proposed project on the local roadway network in combination with future buildout of the City of Davis under cumulative conditions, noise levels have been calculated for Cumulative and Cumulative Plus Project conditions at the nearest existing sensitive receptors

using the methodology described in the Method of Analysis section. Table 4.10-14 compares Cumulative No Project with Cumulative Plus Project traffic noise levels to determine if the proposed project's contribution to the cumulative noise environment is considerable. As shown in the table below, noise-level increases under Cumulative Plus Project conditions would not be above the applicable threshold.

Based on the above, under Cumulative Plus Project conditions, the proposed project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the City or by other agencies. Therefore, a ***less-than-significant*** cumulative impact would occur.

Mitigation Measure(s)

None required.

Table 4.10-14
Predicted Cumulative and Cumulative Plus Project Traffic Noise Levels

Roadway	Segment	Predicted Exterior Noise Level at Closest Sensitive Receptors (dBA L_{dn})				Exceeds Threshold?
		Cumulative	Cumulative Plus Project	Change	Threshold of Significance	
Alhambra Drive	South of East Covell Boulevard	51.6	52.5	0.9	>60 or +5.0 dB	No
Alhambra Drive	West of Mace Boulevard	60.7	60.8	0.1	+3.0 dB	No
East Covell Boulevard	West of Market Avenue	67.3	67.7	0.4	+1.5 dB	No
East Covell Boulevard	East of Cannery Avenue	61.5	61.9	0.4	+3.0 dB	No
East Covell Boulevard	East of Pole Line Road	64.7	65.5	0.8	+3.0 dB	No
East Covell Boulevard	West of Baywood Lane	63.2	64.0	0.8	+3.0 dB	No
East Covell Boulevard	West of Manzanita Lane	63.2	64.0	0.8	+3.0 dB	No
East Covell Boulevard	West of Wright Boulevard	64.3	65.1	0.8	+3.0 dB	No
East Covell Boulevard	West of Monarch Lane	66.1	66.8	0.7	+1.5 dB	No
East Covell Boulevard	East of Alhambra Drive	59.1	59.8	0.7	>60 or +5.0 dB	No
East Covell Boulevard	West of Alhambra Drive	60.9	61.7	0.8	+3.0 dB	No
Pole Line Road	South of East Covell Boulevard	62.0	62.3	0.3	+3.0 dB	No
Pole Line Road	North of Picasso Avenue	64.9	64.9	0.0	+3.0 dB	No
Pole Line Road	North of Donner Avenue	65.6	65.7	0.1	+1.5 dB	No
Pole Line Road	North of Moore Boulevard	68.0	68.1	0.1	+1.5 dB	No

Source: Saxelby Acoustics, LLC, 2025.

4.11. Population and Housing

4.11 POPULATION AND HOUSING

4.11.1 INTRODUCTION

The purpose of the Population and Housing chapter of the EIR is to evaluate the potential for the proposed project to induce substantial population growth within the area, either directly or indirectly, and/or displace substantial numbers of existing housing and/or people, necessitating the construction of replacement housing elsewhere. The "area" where population growth could be induced as a result of the project, as defined for purposes of this analysis, is the City of Davis. The Population and Housing section is primarily based on the City of Davis General Plan[1] and associated EIR,[2] the City of Davis 2021-2029 Housing Element, the Sacramento Area Council of Governments' (SACOG) Regional Housing Needs Plan 2021-2029,[3] and information from the U.S. Census Bureau.

4.11.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing population and housing in the City of Davis, including current and projected growth rates for the City.

Existing On-Site Population and Housing

Existing housing units and population are not located within the project site. The project site currently consists of generally flat land currently used for agricultural activities, with approximately 230.6 acres historically and currently planted with row crops. Three private, dirt access roads run in a southwest-to-northeast direction through the project site and loop around the site; a drainage course (Channel A) with associated riparian habitat runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately five to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A.

City of Davis Population Trends

U.S. Census data indicates that the City of Davis experienced strong population growth from 1990 to 2000, increasing from 46,209 to 60,308 persons at an annual average increase of 3.05 percent, as shown in Table 4.11-1. During 2000 to 2010, the rate of growth declined to an annual average increase of 0.88 percent, reaching a total population of 65,622 in 2010. The annual average increase has continued to decline, with the most recent population estimates from the U.S. Census Bureau indicating that the City's population has decreased slightly from 66,850 in 2020 to a population of 65,832 in 2023, a negative 0.15 percent annual average change from 2020.[4]

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1 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
2 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.
3 Sacramento Area Council of Governments. *SACOG Regional Housing Needs Plan (2021-2029)*. Adopted March 2020.
4 U.S. Department of Commerce. *United States Census Bureau*. Available at: https://www.census.gov/. Accessed May 2025.

Table 4.11-1 City of Davis Population Growth		
Year	**Population**	**Annual Average Change**
1990	46,209	-
2000	60,308	3.05%
2010	65,622	0.88%
2020	66,850	0.19%
2023	65,832	-0.15%
Source: U.S. Census Bureau, 1992, 2000, 2024.		

City of Davis Housing Stock

Table 4.11-2 illustrates the City's housing stock from the years 2006 to 2023, based on information from the U.S. Census Bureau. As seen in the table, the number of housing units increased from 25,502 in 2010 to 25,732 in 2014-2018, and has slightly increased to 25,941 in 2019-2023.

Table 4.11-2 City of Davis Housing Units		
Year	**Housing Units**	**Annual Average Change**
2006-2010	25,502	-
2014-2018	25,732	0.225%
2019-2023	25,941	0.02%
Sources: City of Davis Housing Element [page 68]; U.S. Census Bureau, 2024.		

According to the City of Davis Housing Element, the average number of persons residing in a dwelling unit in Davis is 2.57. In 2010, the overall vacancy rate in the City was 3.9 percent. Between 2014 and 2018, the overall vacancy rate in the City increased to 4.4 percent, with 1,135 vacant units.[5] Most recently, a vacancy survey conducted by University of California, Davis (U.C. Davis) in 2024 identified a vacancy rate of approximately 4.2 percent, with approximately 6,763 vacant units in the City.[6]

City of Davis Growth Projections

SACOG is an association of local governments from six counties and 22 cities within the Sacramento Region, which includes the City of Davis. SACOG produces regional growth projections for the City of Davis through 2036. As provided by SACOG, the City is projected to have approximately 28,267 housing units and an increase in total population to 76,884 in 2036. SACOG estimates that Davis will continue to grow at approximately one-third the rate of the broader region.[7]

Regional Housing Needs Plan

The Regional Housing Needs Allocation (RHNA) is a minimum projection of additional housing units needed to accommodate projected household growth of all income levels by the end of the housing element's statutory planning period. Based on SACOG's adopted RHNA, each city and county must update the housing element of their General Plan to demonstrate how the jurisdiction will meet the expected growth in housing need over the planning period.

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5 City of Davis. *2021-2029 Housing Element* [pg. 72]. Adopted December 5, 2023.

6 Bae Urban Economics. *2024 Apartment Vacancy and Rental Rate Survey Presented on Behalf of UC Davis Student Housing and Dining Services*. Available at: https://housing.ucdavis.edu/_pdf/vacancy-survey/2024-vacancy-survey.pdf. Accessed July 2025.

7 City of Davis. *2021-2029 Housing Element* [pg. 66-67]. Adopted December 5, 2023.

According to the U.S. Department of Housing and Urban Development (HUD), housing is classified as "affordable" if households do not pay more than 30 percent of income for payment of rent (including utilities) or monthly homeownership costs (including mortgage payments, taxes, and insurance). SACOG adopted their current Regional Housing Needs Plan (RHNP) on March 20, 2020, which officially assigns the allocations to cities and counties in the six-county Sacramento region. SACOG's RHNA covers the planning period from 2021 to 2029, and defines income unit categories as follows:

- Very Low-Income Unit: is one that is affordable to a household whose combined gross household income is at or lower than 50 percent of the Yolo County median income.
- Low-Income Unit: is one that is affordable to a household whose combined gross household income is at or between 50 and 80 percent of the Yolo County median income.
- Moderate Income Unit: is one that is affordable to a household whose combined gross household income is at or between 81 and 120 percent of the Yolo County median income.
- Above Moderate Income Unit: is one that is affordable to a housing whose combined gross household income is at or greater than 120 percent of the Yolo County median income.

In 2020, the median household income for a four-person household within Yolo County was $92,500. According to SACOG's RHNP, the City of Davis's total RHNA number for all income levels is 2,075 dwelling units (see Table 4.11-3).[8]

Table 4.11-3
City of Davis RHNA Allocation

Income Level	RHNA Requirement	Percent of Total
Extremely Low Income (≤30% AMI)	290	14.0%
Very Low Income (>30% AMI, ≤50% AMI)	290	14.0%
Low Income (>50% AMI, ≤80% AMI)	350	16.9%
Moderate Income (>80% AMI, ≤120% AMI)	340	16.4%
Above Moderate Income (>120% AMI)	805	38.8%
Total	**2,075**	**100.0%**

Source: Sacramento Area Council of Governments, 2020.

4.11.3 REGULATORY CONTEXT

Specific federal regulations do not directly pertain to population and housing of an area. However, a number of existing regulatory controls pertaining to population and housing, including State and local laws and ordinances, are listed below, as applicable.

State Regulations

The following are two applicable State regulations related to the proposed project.

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The share is known as RHNA and is based on a RHNP developed by councils of government. The State-mandated RHNA process (Government Code Sections 65580 et seq.) requires SACOG to develop a methodology that determines how to divide and distribute an overall allocation that the region receives from the State.

[8] City of Davis. *2021-2029 Housing Element* [pg. 3-4]. Adopted December 5, 2023.

Senate Bill 330

California Senate Bill (SB) 330, "The Housing Crisis Act of 2019," was signed into law by Governor Newsom on October 9, 2019, and became effective January 1, 2020. The bill establishes a statewide housing emergency to be in effect until January 1, 2025. Subsequently, SB 8 was signed into law by Governor Newsom on September 16, 2021, extending "The Housing Crisis Act of 2019" to be in effect until January 1, 2030. During the housing emergency period, cities and localities in urban areas, including the City of Davis, are generally prohibited from rezoning actions or imposing new development standards that would reduce the zoned capacity for housing or adopting new design standards that are not objective. In such jurisdictions, the demolition of existing housing units is only permitted if replacement units are provided. The demolition of existing low-income units is only permitted if certain conditions related to affordability and tenant protections are met.

Local Regulations

The following are local regulations applicable to the proposed project.

Sacramento Area Council of Governments

SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the region and the corresponding Metropolitan Transportation Improvement Program (MTIP). The MTIP identifies short-term projects (seven-year horizon) in more detail.

Metropolitan Transportation Plan/Sustainable Communities Strategy

The 2035 MTP/SCS is a long-range plan for transportation improvements in the region. The 2035 MTP/SCS is based on projections for growth in population, housing, and jobs. SACOG determines the regional growth projections by evaluating baseline data, historic reference data, capacity data, and current MTP data about assumptions used in the most recent MTP/SCS. Baseline data includes existing housing units and employees, the jobs-to-housing ratio, and the percent of regional growth share for housing units and employees. The historic reference data is based upon five- and ten-year residential building permit averages and historic county-level employment statistics. The capacity data includes the General Plan data for each jurisdiction. SACOG staff meets with each jurisdiction to discuss and incorporate more subjective considerations about planned growth for each area. Finally, SACOG makes a regional growth forecast for new homes and new jobs, based upon an economic analysis provided by a recognized expert in order to estimate regional growth potential based on market analysis and related economic data. The growth forecast is then incorporated into the MTP/SCS.

City of Davis General Plan

The applicable Davis General Plan goals and policies relating to population and housing are presented below.

Land Use and Growth Management Chapter

Policy LU A.3	Require a mix of housing types, densities, prices and rents, and designs in each new development area.

2021-2029 Housing Element

Goal 1	Provide an adequate supply of housing for people of all ages, incomes, lifestyles, and types of households, including for households with special housing needs.

	Policy 1.1	Maintain adequate sites to achieve Davis' RHNA goals for the 2021-2029 Planning Period.
	Policy 1.2	Facilitate the production of a variety of housing types that meet the housing needs of an economically and socially diverse Davis.
	Policy 1.3	Provide housing that accommodates a variety of housing needs, including for persons with disabilities, seniors, farmworkers, extremely low-income households.
	Policy 1.7	As part of proposed large housing developments, encourage a range of housing types including small residential lots and other smaller unit types to facilitate the creation of more inclusive communities.
Goal 2:	Provide housing that is affordable for lower-income households.	
	Policy 2.1	Meet the projected local need for housing affordable to extremely low-, very low-, low-, and moderate-income households according to Davis' eight-year fair share of regional housing needs.
	Policy 2.6	Provide housing for Davis' workforce, including but not limited to teachers, UC Davis faculty and staff, retail and service workers, healthcare workers, and City employees.
	Policy 2.9	Ensure that new residential development on lands added to the City's General Plan Area include affordable housing that meets or exceeds the City's requirements (see Appendix F).

City of Davis Municipal Code

The following are applicable City housing and growth regulations related to the proposed project.

Davis Municipal Code Section 18.05.040: Provision of Affordable Housing

Pursuant to Davis Municipal Code Section 18.05.040, the developer must submit, concurrently with or prior to the submission of an application for the first discretionary approval for a development, an application as provided by the City describing a proposed affordable housing plan, which must provide a program to provide affordable housing in accordance with Davis Municipal Code Article 18.05 and the intended method for implementing such a program. Any application resubmitted by a developer to amend an affordable housing plan after it has been approved by the City must be deemed a new application for the development. Before any agreements between parties or transfer of land is made, all agreements, the affordable housing plan, and budget for the provision of affordable housing pursuant to Article 18.05 of the Municipal Code must be approved by the City, in order to ensure that the affordable housing to be developed pursuant to the affordable housing plan will be economically sustainable over time, in accordance with the required duration of affordability for the affordable housing.

Davis Municipal Code Section 18.05.050: Ownership Development Affordable Housing Standards

According to Davis Municipal Code Section 18.05.050, a developer of residential ownership developments containing five or more units must provide, to the extent feasible, affordable housing for very low-, low-, , as set forth in an affordable housing plan approved by the City. To the maximum extent feasible, each developer must meet the ownership affordable unit requirement as it pertains to the project, as set forth within Section 18.05.050 of the Municipal Code.

Davis Municipal Code Section 18.05.060: Rental Development Affordable Housing Standards

According to Davis Municipal Code Section 18.05.060, a developer of rental housing developments containing seven or more units shall provide at least 15 percent of the total number of units as affordable housing units on-site. Of the total number of affordable housing units provided, 50 percent shall be made affordable to low-income households and the other 50 percent shall be made affordable to very-low-income households. Alternatively, the developer may comply with an alternative means of compliance as provided for in the Rental Housing Inclusionary Guidelines.

4.11.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to population and housing. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, a population and housing impact may be considered significant if implementation of the proposed project would:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure); or
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (see Chapter 5, Effects Not Found to be Significant).

As noted above, issues related to whether the proposed project would result in the following impact is discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Method of Analysis

The section below evaluates the potential population and housing impact resulting from the development of the proposed project. The level of significance of the impact is determined by evaluating whether the proposed project, either directly or indirectly, would induce substantial unplanned population growth in the area.

Project-Specific Impacts and Mitigation Measures

The following discussion of population and housing impacts is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.11-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure). Based on the analysis below, the impact is *significant and unavoidable*.

Growth can be induced in a number of ways, including through the elimination of obstacles to growth or through the stimulation of economic activity within the region. Examples of projects likely to have growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or office complexes in areas that are currently only sparsely developed or are undeveloped. The following sections describe potential effects related to direct and indirect population growth associated with implementation of the proposed project.

Direct Population Growth

The 1,250-unit affordable and market-rate residential development would be comprised of 197 low-density single-family detached units, 515 medium-density single-family units/duplexes/townhomes, and 538 high-density affordable and market rate apartments/townhomes/condominiums. The proposed residential development would increase the available housing within the City of Davis as well as the population in the area. Using the 2.57 persons/household average household size for the City of Davis, the proposed 1,250 residential units would house an estimated 3,213 residents.

Residential development is not allowed under the existing Yolo County General Plan land use and zoning designations for the project site, with the exception of farmworker housing. Thus, the proposed project would result in an increase of approximately 1,250 units, or 3,213 residents beyond what is currently anticipated for the site.

Annexation of the project site into the City and development of 1,250 residential units, with the associated addition of approximately 3,213 residents, would increase the total current population of the City of Davis from 65,832 to approximately 69,045, or a 4.9 percent increase. As discussed in the Existing Environmental Setting section of this chapter, SACOG has projected that the City's population could grow to as much as 76,884 residents by 2036. However, because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the proposed project has not been included as part of the City's growth projections. Therefore, the increase in population resulting from the proposed project would not be within the range of growth projections assumed for the City of Davis. As discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, the proposed utility improvements related to water, sanitary sewer, and storm drainage services would be

sized to accommodate only the proposed project and would connect to existing infrastructure in the project vicinity.

Indirect Population Growth

The proposed project would result in an on-site permanent population of 3,213 residents. The new residential population would likely patronize local businesses and services in the area, fostering economic growth. While construction of the proposed project would result in increased employment opportunities in the construction field, which could potentially result in increased permanent population and demand for housing in the vicinity of the project site, employment patterns of construction workers are such that construction workers would not likely, to any significant degree, relocate their households as a result of the construction-related employment opportunities associated with the proposed project.

The proposed project would provide employment opportunities which would likely be filled from the local employee base. With the exception of household and landscape maintenance jobs, and jobs associated with the neighborhood retail uses, proposed daycare facility, and community park, a substantial number of new permanent jobs would not be directly created by the proposed project. Therefore, the proposed project would not result in substantial long-term employment growth in the area.

The residential population generated by the proposed project would also result in an increased demand for public services. However, as discussed in Chapter 4.12, Public Services and Recreation, and Chapter 4.14, Utilities and Service Systems, of this EIR, the project's demand for public services could be accommodated by existing services, with the exception of fire protection services, which would be met by the inclusion of a new fire station that is proposed to be included as part of the nearby Village Farms Project. If a fire protection facility is not included elsewhere, the proposed project would include a new fire station on the southwestern HDR parcel. The new fire station would ultimately be designed and implemented by the Davis Fire Department (DFD), but could include a four-bay fire station, as described in Chapter 3, Project Description, of this EIR. As such, the proposed project would not create a need for new or altered governmental facilities, the construction of which could result in significant environmental impacts. Additionally, the proposed utility infrastructure improvements would be sized and designed to serve only the proposed project. However, as the City's WWTP may be at or nearing its available capacity, and the project would pay its fair share toward future expansion of the WWTP, the project could contribute toward eliminating obstacles to unplanned population growth.

Conclusion

Based on the above, the proposed project would not result in substantial long-term employment growth in the area, and would connect to existing utility infrastructure in the immediate project vicinity, and the new infrastructure improvements would be sized to accommodate only the proposed project. As such, the proposed project would not indirectly induce substantial unplanned population growth.

However, the proposed project would include development that would result in direct on-site unplanned population growth. Population growth resulting from the proposed project would not be within the SACOG or City of Davis growth estimates for the project

area. As a result, the proposed project would be considered to induce substantial unplanned population growth, and a ***significant*** impact would occur. Notwithstanding, population growth, in and of itself, is not a direct physical effect on the environment. The physical impacts associated with population growth resulting from the proposed project are discussed throughout this EIR. In addition, potential impacts related to growth inducement are discussed further within Chapter 6, Statutorily Required Sections, of this EIR, consistent with CEQA Guidelines Section 15126.2(d).

Mitigation Measure(s)

Feasible mitigation does not exist to reduce the above impact to a less-than-significant level. Therefore, the impact would remain *significant and unavoidable*. However, it should be noted that the Legislature found that, "[a]ccording to reports and data, California has accumulated an unmet housing backlog of nearly 2,000,000 units and must provide for at least 180,000 new units annually to keep pace with growth through 2025." (Gov. Code, Section 65589.5(a).)" The Legislature enacted the Housing Crisis Act of 2019 (Stats. 2019, ch. 654), the centerpiece of which is Government Code section 66300. The Legislature intends that public agencies, in regulating private activities affecting the environment, "shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." (Public Resources Code [PRC] Section 21000(g).) PRC Section 21159.26 states that "[w]ith respect to a project that includes a housing development, a public agency may not reduce the proposed number of housing units as a mitigation measure or project alternative for a particular significant effect on the environment if it determines that there is another feasible specific mitigation measure or project alternative that would provide a comparable level of mitigation. This section does not affect any other requirement regarding the residential density of that project." As such, the development of 1,250 residential units would have a positive impact from the perspective of the housing crisis in the State.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Additional details regarding the cumulative setting are included in Chapter 6, Statutorily Required Sections, of this EIR.

4.11-2 Cumulative unplanned population growth. Based on the analysis below, the cumulative impact is *cumulatively considerable* and *significant and unavoidable*.

Buildout of the City of Davis was anticipated to result in population growth within the plan area through the buildout of urban and rural developments. Since approval of the General Plan, the City has approved several large residential projects, such as the Cannery Subdivision with 610 residential units, the Bretton Woods Subdivision with 560 residential units, and the Palomino Place Project with 175 residential units. In addition, the Davis Innovation and Sustainability Campus (DiSC) 2022, with 460 units,

was approved by City Council but denied by public voters. The approval of the aforementioned residential development projects has increased the amount of land designated for residential development within the City. In addition, several new residential subdivisions are currently proposed, including Village Farms Davis with 1,800 residential units, located approximately 1.03 miles west of the project site. It should be noted that the Village Farms Davis Project is also located outside the City Limits, and, therefore, the addition of the 1,800 residential units associated with the Village Farms Davis Project would be unplanned. The aforementioned residential developments, in combination with the proposed project, would result in a total of 4,855 new residential units within the City of Davis. As shown above in Table 4.11-3, the General Plan Housing Element projected that a total of 1,737 housing units would be developed in the City between 2020 and 2036. As such, the cumulative addition of 4,855 residential units, 1,250 of which would be developed as a result of the proposed project, would exceed the number of units anticipated for development in the City between 2020 and 2036. Thus, development of the proposed project with 1,250 residential units, in combination with other cumulative development in the City of Davis, would result in a cumulative significant impact.

As discussed within Impact 4.11-1 above, the population growth related to implementation of the proposed project has not been anticipated for the region by the MTP/SCS. However, population growth itself does not constitute a significant physical environmental effect. Rather, the determination of significance is based on whether population growth associated with a project could result in indirect physical environmental impacts. As such, the cumulative analysis within each technical chapter of this EIR evaluates the physical environmental impacts of cumulative development.

Based on the above, the contribution of the proposed project to the cumulative significant impact associated with planned and potential development in the City of Davis would be ***cumulatively considerable***.

Mitigation Measure(s)

Feasible mitigation does not exist to reduce the above potential impact to a less-than-significant level. Therefore, the impact would remain *cumulatively considerable* and *significant and unavoidable*.

4.12. Public Services and Recreation

4.12 PUBLIC SERVICES AND RECREATION

4.12.1 INTRODUCTION

The Public Services and Recreation chapter of the EIR summarizes the existing setting and identifies potential new demands resulting from the development of the proposed project on fire and police protection services, schools, parks, and other public facilities. Additionally, the chapter evaluates if the proposed project would 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 to include or require new or expanded recreational facilities that could have an adverse environmental effect. Information for this section was drawn primarily from the City of Davis General Plan[1] and the associated General Plan EIR,[2] as well as correspondence with applicable service providers.

4.12.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing public services in the City of Davis, including fire and police protection services, schools, parks, and other public facilities.

Fire Protection Services

The project site is currently located within the service area of the East Davis County Fire Protection District (EDCFPD) in an unincorporated portion of Yolo County. Upon annexation into the City of Davis, the site would be served by the Davis Fire Department (DFD). The DFD serves a 133-square-mile area containing a population of over 68,986 people, on a total annual budget of nearly $18 million.[3] The DFD provides pre-hospital emergency medical services; minimizes loss from fires, hazardous materials incidents, natural disasters, and other emergencies; manages the City's emergency services; and coordinates citywide plans for large scale disasters and emergency incidents.

The DFD has contractual agreements with the EDCFPD, the Springlake Fire Protection District, and the No Man's Land Fire Protection District to provide emergency response to the foregoing areas. The land covered by the City of Davis and the three foregoing fire protection districts is divided into seven emergency first-response areas. The first-response areas provide clearly defined territories for dispatching the nearest fire and emergency medical service (EMS) personnel and equipment to an emergency. In addition, the DFD has an automatic aid agreement with University of California, Davis (UC Davis) and the cities of Woodland, West Sacramento, and Dixon and a mutual aid agreement with all other fire protection agencies in Yolo County and throughout California.

The DFD currently operates three fire stations within the City of Davis, including Station 31, located at 530 Fifth Street; Station 32, located at 1350 Arlington Boulevard; and Station 33,

1 City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.
2 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School.* Certified May 2001.
3 City of Davis. *Budget in Brief: FY 2024-2025 Adopted Budget.* Available at: https://www.cityofdavis.org/home/showpublisheddocument/19764/638652837987600000. Accessed July 2025.

located at 425 Mace Boulevard. The closest fire station to the site is Station 33, located approximately 1.5 miles southeast of the project site. The response area for Station 33 includes the eastern portion of the City.

The DFD maintains a staff of 45 shift personnel (three battalion chiefs, 12 captains and 30 firefighters), one fire chief, one administrative staff, and one fire marshal, for a total of 48 employees. Shift personnel are divided into three 24-hour-a-day shifts. The DFD equipment consists of three engines, one ladder truck, two squad units, two grass/wildland units, one water tender, three reserve engines, two command vehicles, and three additional staff vehicles, as well as two antique fire apparatus units.[4]

Currently, the required response time standard for the DFD is six minutes for more than 90 percent of all incidents, consistent with the National Fire Protection Association (NFPA) 1710 response time standard.[5] NFPA 1710 Section 4.1.2.1 establishes the following performance objectives: 240 seconds (four minutes) or less travel time for the arrival of the first engine company at a fire suppression incident; and 360 seconds (six minutes) or less travel time for the arrival of the second company with a minimum staffing of four personnel at a fire suppression incident.[6] The six-minute response time accounts for a one-minute dispatch processing time, a one-minute turnout time, and a four-minute driving response time. The entirety of the project site is currently located outside of the four-minute drive time zone (see Figure 4.12-1).

The DFD primarily obtains funds from several revenue sources through the City's General Fund, which is funded from revenues generated by local sales and property taxes, motor vehicle-in-lieu fees, the municipal service tax, business license tax, and by revenues generated from permits and fees.[7] The City's General Fund contributes toward the DFD facilities, apparatus, and equipment necessary to maintain adequate service levels. The fiscal year 2024-2025 General Fund expenditures for the DFD were $17.9 million.

Law Enforcement Services

The project site is currently located within an unincorporated portion of Yolo County, which is provided law enforcement services by the Yolo County Sheriff's Office. Upon annexation into the City of Davis, the site would be served by the Davis Police Department (DPD).

The DPD is located at 2600 Fifth Street, approximately 2.4 miles southwest of the project site. The DPD provides services to approximately 66,000 City residents. Of the 90 full-time employees, 60 are sworn officers and 30 are civilian support positions.[8] The DPD staff is supplemented by over 15 volunteers. The DPD is organized into the following four divisions:

- Administration Division: The Administration Division provides overall management, planning, coordination, and evaluation of department functions.

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4 City of Davis. *Welcome to the Fire Department.* Available at: https://www.cityofdavis.org/city-hall/welcome-to-the-fire-department. Accessed August 2025.

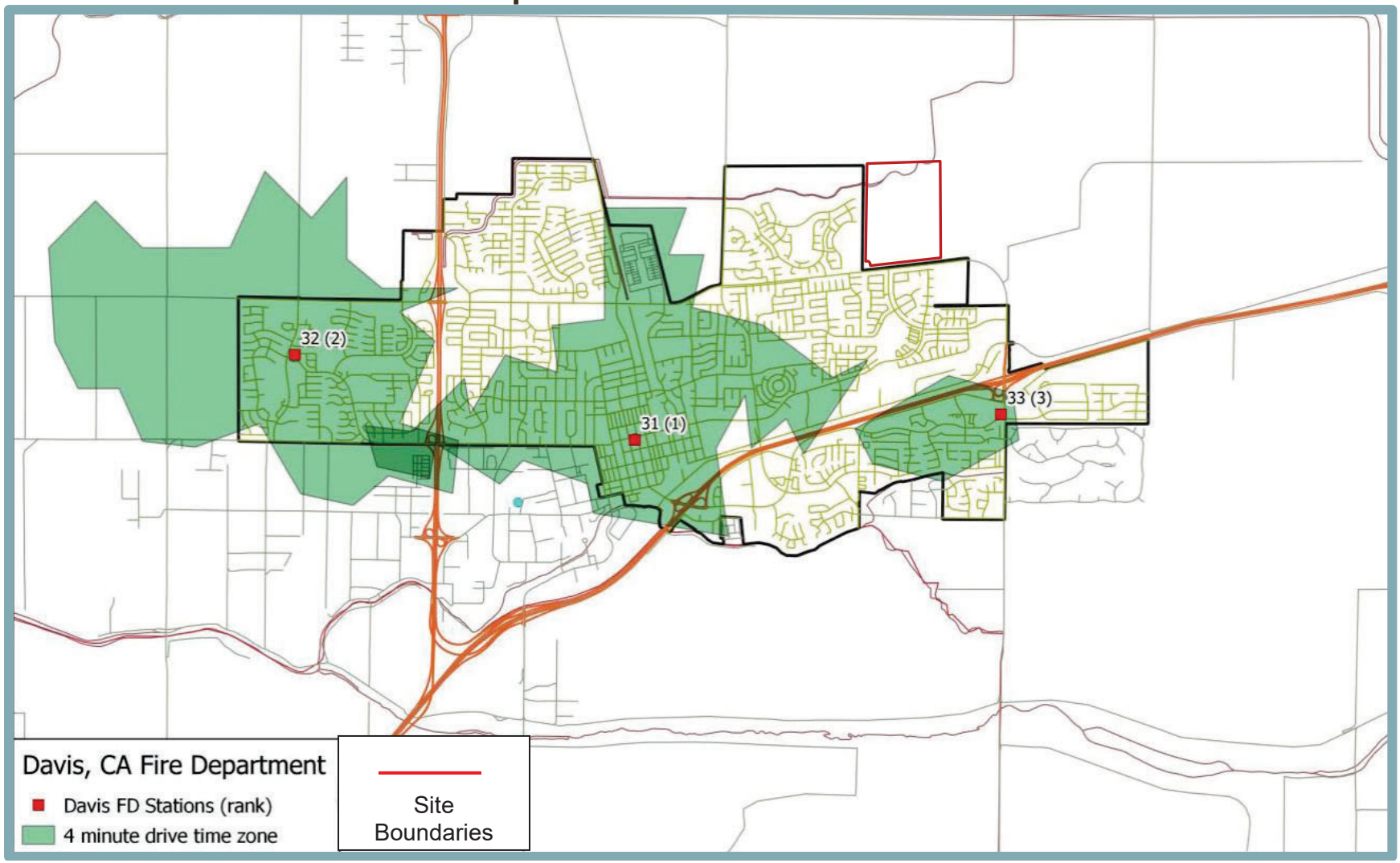
5 Sandholdt, Patrick, Fire Marshal, Davis Fire Department. *Personal communication [email] with Nick Pappani, Vice President, Raney Planning and Management, Inc.* April 10, 2024.

6 Sandholdt, Patrick, Fire Marshal, City of Davis Fire Department. *Personal Communication [email] with Nick Pappani, Vice President, Raney Planning and Management, Inc.* March 12, 2024.

7 City of Davis. *Budget in Brief: FY 2024-2025 Adopted Budget*. 2025.

8 City of Davis. *Administration.* Available at: https://www.cityofdavis.org/city-hall/police-department/administration. Accessed May 2025.

Figure 4.12-1
Davis Fire Department Four-Minute Drive Time Zone



Source: Davis Fire Department, 2024.

*Figure not OCR compatible.

- Patrol Division: The Patrol Division provides first-line emergency response to crimes in progress, accidents, and tactical situations.
- Investigations Division: The Investigations Division handles major criminal investigations of all types involving adult and juvenile offenders, as well as missing persons of all ages.
- Records and Communications Division: The Records and Communications Division is the hub of the department, which receives all emergency 911 and nonemergency calls for service and ensures that appropriate resources are dispatched in a timely manner.

The largest division in the DPD is the Patrol Division, which is comprised of five patrol teams and the Traffic Unit. According to the City, the Patrol Division is staffed with two lieutenants, six sergeants, five corporals, and 31 officers. Sworn officers perform law enforcement tasks, as well as administration and supervision, and civilian personnel are involved in administration, support services, supervision, dispatch, parking enforcement, and community service duties.[9]

UC Davis also maintains an on-campus police department that has a mutual aid agreement with the City for major incidents. Similar to the DFD, the DPD primarily obtains funds through the City's General Fund. The collected funds contribute to DPD facilities, apparatus, and equipment determined necessary by the City for the DPD to meet applicable response time and staffing level standards. The fiscal year 2024-2025 General Fund expenditures for the DPD were $25.2 million.[10]

Schools

The project site is located within the boundaries of the Davis Joint Unified School District (DJUSD). The DJUSD consists of ten elementary schools, four junior high schools, three high schools, two high schools, a K-12 school for independent study, an adult and community education program, and a preschool center. According to the California Department of Education's enrollment data, the DJUSD served a total of 8,246 students during the 2024-25 academic year, including 4,104 elementary school students, 1,645 junior high students, 1,930 high school students, and 129 students in nonpublic and nonsectarian schools.[11] The nearest schools to the project site include Fred T. Korematsu Elementary, located 0.34-mile to the southwest of the site; Frances Ellen Watkins Harper Junior High School (Harper Junior High), located approximately 200 feet south of the site, across East Covell Boulevard; and Davis Senior High School, located approximately 2.6 miles southwest of the site. Table 4.12-1 shows the enrollment total of schools within the DJUSD for the 2024-25 academic year.

With respect to school capacity, the DJUSD maintains an Inter-District Transfer (IDT) agreement with surrounding school districts. The IDT program allows parents and/or legal guardians to enroll their student at a DJUSD school even if the school is located outside of the district in which the student resides. If a student's parent or legal guardian works more than 10 hours a week in the City of Davis, the student meets the Resident by Employment standard established by California Education Code Section 48204. Resident by Employment students cannot be denied admittance into the DJUSD if space is available to accommodate them, and the students' IDT qualification cannot be revoked in the future once the students are admitted.

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9 City of Davis. *Patrol.* Available at: https://www.cityofdavis.org/city-hall/police-department/patrol. Accessed August 2025.

10 City of Davis. *City Budget & Financial Reporting.* Available at: https://www.cityofdavis.org/city-hall/finance/city-budget. Accessed May 2025.

11 California Department of Education. *DataQuest.* Available at: https://dq.cde.ca.gov/dataquest/. Accessed July 2025.

The number of IDT students increased over the past five years, in contrast to DJUSD's declining enrollment. However, according to the DJUSD, enrollment has significantly declined in recent years, including fewer IDT enrollment numbers and an unexpected drop in kindergarten enrollment for the 2024-25 school year. DJUSD currently predicts that enrollment rates could drop by as much as 1,000 students over the next 10 years if enrollment trends do not change. Based on the declining enrollment rate, the DJUSD currently has the capacity to accept new students.

Table 4.12-1
Davis Joint Unified School District Enrollment By Facility

School Facility	2024-25 Enrollment
Birch Lane Elementary	571
Cesar Chavez Elementary	510
Da Vinci Charter Academy	562
Davis School for Independent Study	124
Davis Senior High	1755
Fairfield Elementary	48
Frances Ellen Watkins Harper Junior High	533
Fred T. Korematsu Elementary at Mace Ranch	509
King (Martin Luther) High (Continuation)	51
Marguerite Montgomery Elementary	457
Nonpublic, Nonsectarian Schools	5
North Davis Elementary	552
Oliver Wendell Holmes Junior High	588
Patwin Elementary	379
Pioneer Elementary	572
Ralph Waldo Emerson Junior High	524
Robert E. Willett Elementary	506

Source: California Department of Education, July 2025.

The DJUSD Facilities Master Plan outlines the district's long-range educational program goals and facility improvements.[12] The Facilities Master Plan includes a facility needs assessment for each school to assess the existing conditions, identify needs, and estimate project costs. Projected improvements to schools within the district include modernizing classrooms; improving physical education facilities; enhancing exterior environments, including learning courts, quads, gardens, and amphitheaters; and improving technological infrastructure. In accordance with Proposition 1A/Senate Bill (SB) 50, which is discussed further below in the Regulatory Context section, the DJUSD assesses developer fees on new construction. The current fees are $5.17 per square foot (sf) for new residential construction and additions and $0.84 per sf for new commercial and industrial development.[13]

In addition, on November 2, 2023, the DJUSD Board of Trustees voted to place a parcel tax renewal measure known as Measure N on the March 5, 2024 ballot.[14] The measure was approved by voters, which renewed an existing parcel tax at $768 per year that is anticipated to total

[12] Davis Joint Unified School District. *Facilities Master Plan*. Available at: https://www.djusd.net/bond/facilityplanning/facility_master_plan. Accessed May 2025.
[13] Davis Joint Unified School District. *Developer Fees*. Available at: https://www.djusd.net/departments/business_services/developer_fees. Accessed May 2025.
[14] Davis Joint Unified School District. *Measure N – Parcel Tax Renewal 2024.* Available at: https://www.djusd.net/about/parcel_tax. Accessed May 2025.

approximately $11.7 million per year. The tax gathered under Measure N will continue to act as a source of funding for DJUSD schools.

Parks and Recreation Facilities

The City's Parks and Community Services Department maintains over 457 acres of parks and greenbelts across 41 neighborhood and community parks, which consist of various amenities, including 73 play areas; 14 tennis courts; 16 pickleball courts; three bocce ball courts; disc golf; 14 basketball courts; one bike polo court; six outdoor fitness equipment areas, one outdoor amphitheater, and many picnic and BBQ areas available for reservation (see Figure 4.12-2).[15]

Pursuant to Table 14 of the City's General Plan, the City maintains a standard of five acres of parkland per 1,000 residents within the City Limits. In addition, according to the City's Parks and Recreation Facilities Master Plan Update, the City requires community parks to be located within 1.5 miles of all residential units. The City further requires neighborhood parks to be located within three-eighths of a mile of all residential units,[16] and recommends that 10 percent of new residential development be dedicated to greenbelt areas.

The nearest existing parks and recreation facilities to the project site are Wildhorse Park and Sandy Motley Park, located approximately 300 feet and 0.78-mile west of the site, respectively, within the Wildhorse neighborhood; Robert Arneson Park, located approximately 0.46-mile west of the site; and La Playa Park and Slide Hill Park, located approximately 0.22-mile and 0.25-mile south of the site, respectively, across East Covell Boulevard. Additionally, the proposed project would connect to existing off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail), west (i.e., Wildhorse Agricultural Buffer), and south (i.e., existing undercrossing at East Covell Boulevard) of the project site.

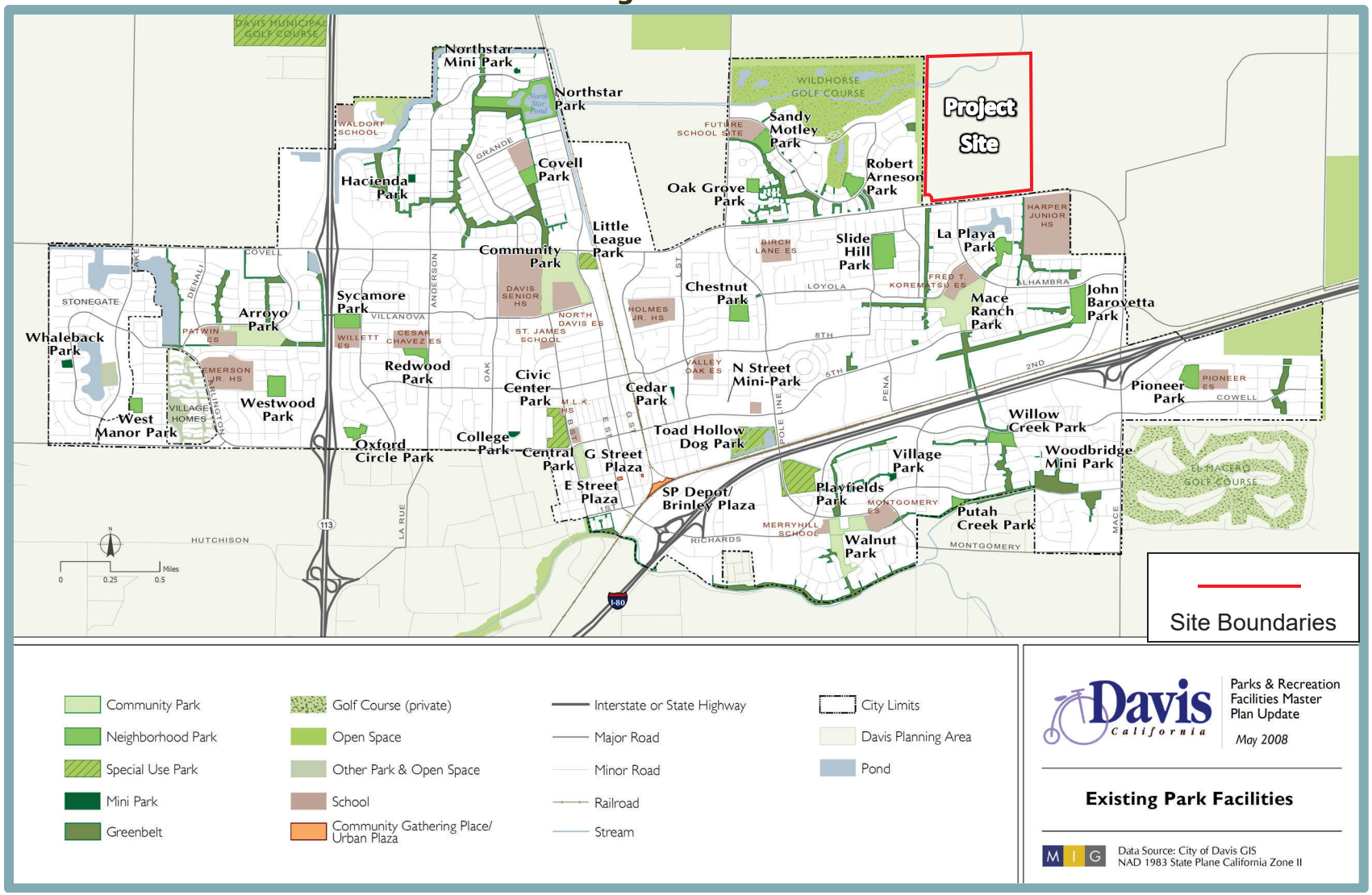
Other Public Facilities

The Yolo County Library maintains eight library branches, an archive and historic collections center. The Mary L. Stephens Davis Library is located at 315 East 14th Street, approximately 2.31 miles southwest of the site. The library features six study rooms and offers free Wi-Fi access and computer use to the public. The South Davis Montgomery Library is located approximately 1.7 miles south of the site at 1441 Danbury Street within the Marguerite Montgomery Elementary School. In addition, the Yolo County Library is actively planning a new library west of the South Davis Montgomery Library, across Walnut Park, which would be known as the Walnut Park Library and be located at 2700 Lillard Drive.[17] The aforementioned libraries and associated services are open to the public during public library hours.

The Yolo County Library funds libraries through the County's property tax. Pursuant to Yolo County Code Title 3, Chapter 14, the County's Facilities Authorization and Fee is imposed on new residential projects and commercial improvements to fund countywide library operations.

[15] City of Davis. *Parks and Greenbelts.* Available at: https://www.cityofdavis.org/city-hall/parks-and-community-services/parks-and-open-space. Accessed August 2025.
[16] City of Davis. *Parks and Recreation Facilities Master Plan Update.* Adopted 2012.
[17] Yolo County Library. *Walnut Park Davis Library (coming in 2026!).* Available at: https://yolocountylibrary.org/locations/walnutparklibrary/. Accessed August 2025.

Figure 4.12-2
Existing Park Facilities



Source: City of Davis. Parks and Recreation Facilities Master Plan Update, 2012.

*Figure not OCR compatible.

4.12.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to the provision of public services and recreational facilities do not exist. The following discussion contains a summary review of applicable State and local regulatory controls pertaining to public services and recreation.

State Regulations

The following are the State environmental laws and policies relevant to public services and recreation.

California Fire Code

The California Fire Code (CFC) contains regulations related to construction, maintenance, and use of buildings. Topics addressed in the CFC include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The CFC contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, including regulations for building standards (as also set forth in the California Building Standards Code [CBSC]), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Proposition 1A/Senate Bill 50

Proposition 1A/SB 50 (Chapter 407, Statutes of 1998) is a school construction measure primarily for modernization and rehabilitation of older school facilities and construction of new school facilities. Proposition 1A/SB 50 implemented significant fee reforms by amending the laws governing developer fees and school mitigation, as follows:

- Established the base (statutory) amount (indexed for inflation) of allowable developer fees at $1.93 per sf for residential construction and $0.31 per sf for commercial construction.
- Prohibited school districts, cities, and counties from imposing school impact mitigation fees or other requirements in excess of or in addition to those provided in the statute.

Proposition 1A/SB 50 also prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act […] involving […] the planning, use, or development of real property" (Government Code Section 65996[b]). Additionally, a local agency cannot require participation in the Mello-Roos Community Facilities Act of 1982 (Mello-Roos) for school facilities; however, the statutory fee is reduced by the amount of any voluntary participation in a Mello-Roos district. Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." The law identifies certain circumstances under which the statutory fee can be exceeded, including preparation and adoption of a "needs analysis," eligibility for State funding, and satisfaction of two of four requirements (post-January 1, 2000) identified in the law including: year-round enrollment, general obligation bond measure on the ballot over the last four years that received 50 percent plus one of the votes cast, 20 percent of the classes in portable classrooms, or specified

outstanding debt. Assuming a district qualifies for exceeding the statutory fee, the law establishes ultimate fee caps of 50 percent of costs where the State makes a 50 percent match, or 100 percent of costs where the State match is unavailable. District certification of payment of the applicable fee is required before the City can issue the building permit.

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fees are based upon the residential density, parkland cost, and other factors. Land dedication and fees collected pursuant to the Quimby Act may be used for acquisition, improvement, and expansion of park, playground, and recreational facilities or the development of public school grounds.

Local Regulations

The following are the local regulations relevant to public services and recreation.

City of Davis General Plan

The applicable Davis General Plan goals and policies related to public services and recreation are presented below.

Police and Fire Chapter

Goal POLFIRE 1 Provide high quality police and fire protection services to all areas of the City.

Policy POLFIRE 1.1 Recruit and maintain a staff of high-quality police officers and firefighters.

Policy POLFIRE 1.2 Develop and maintain the capacity to reach all areas of the City with emergency police and fire service within a five-minute emergency response time, 90% of the time. Response time includes alarm processing, turnout time and travel time.

Goal POLFIRE 2 Provide for an emotionally and physically safe environment where the people of Davis are able to live without fear of violence or other forms of abuse.

Policy POLFIRE 2.1 Reduce crime through community policing, public education, crime prevention, neighborhood watch and outreach programs.

Goal POLFIRE 3 Increase fire safety through provision of adequate fire protection infrastructure, public education and outreach programs.

Policy POLFIRE 3.1 Provide adequate infrastructure to fight fires in Davis.

Policy POLFIRE 3.2 Ensure that all new development includes adequate provision for fire safety.

Policy POLFIRE 3.3 Make fire protection services visible and accessible to Davis residents.

Youth and Education Chapter

Goal Y&E 8 Plan for the costs of new school facilities when planning for specific new residential developments.

Policy Y&E 8.1 It shall be the policy of the City to require to the extent legally permissible the full mitigation of school impacts resulting from new residential development within the boundaries of the City.

Goal Y&E 9 Construct new public schools to meet the needs of residential growth.

Policy Y&E 9.1 It shall be the policy of the City to take all legally permissible steps to ensure the full mitigation of impacts of new development on school facilities.

Parks and Open Space

Goal POS 1 Provide ample, diverse, safe, affordable, and accessible parks, open spaces, and recreation facilities and programs to meet the current and future needs of Davis' various age and interest groups and to promote a sense of community, pride, family, and cross-age interaction.

Policy POS 1.2 Provide informal areas for people of all ages to interact with natural landscapes, and preserve open space between urban and agricultural uses to provide a physical and visual edge to the City.

Policy POS 1.7 Use all available mechanisms for preservation of open space.

Goal POS 2 Develop an Urban Agricultural Transition Area around Davis, as shown on the Land Use Map in the Land Use and Growth Management Chapter and according to the concepts illustrated in Figure 32.

Policy POS 2.1 Develop the Urban Agricultural Transition Area to have segments which vary in overall size and configuration, level of development, and type of intended activity.

Goal POS 3 Identify and develop linkages, corridors, and other connectors to provide an aesthetically pleasing and functional network of parks, open space areas, greenbelts, and bike paths throughout the City.

Policy POS 3.1 Require creation of neighborhood greenbelts by project developers in all residential projects, in accordance with Policy LU A.5.

Policy POS 3.2 Develop a system of greenbelts and accessways in new non-residential development areas.

Goal POS 4 Distribute parks, open spaces, and recreation programs and facilities throughout the City.

Policy POS 4.1 Preserve existing parks, greenbelts, and open space areas.

Policy POS 4.2 Construct new parks and recreation facilities.

Goal POS 5 Respect natural habitat areas and agricultural land in planning and maintaining the City's park system.

Policy POS 5.1 Protect and retain wildlife habitat, agricultural land, and open space when planning and maintaining City park lands.

Goal POS 6 Encourage local organizations, the Davis Joint Unified School District, UC Davis, and the private sector to provide, develop, and maintain needed parks, open space, recreation facilities, programs, activities, and special events to the greatest extent possible.

Policy POS 6.1 Give local organizations, the School District, UC Davis, and the private sector opportunities and support for devising and implementing creative solutions for meeting recreation program and facility needs.

Policy POS 6.2 Require dedication of land and/or payment of an in-lieu fee for park and recreational purposes as a condition of approval for subdivisions, as allowed by the Quimby Act (Government Code 66477).

Land Use and Growth Management Chapter

Policy LU A.5 Require neighborhood greenbelts in all new residential development areas. Require that a minimum of 10 percent of newly-developing residential land be designated for use as open space primarily for neighborhood greenbelts.

Davis Municipal Code

The Davis Municipal Code ordinances related to public services and recreation that are applicable to the proposed project are presented below.

Davis Municipal Code Section 8.01.010, Adoption by Reference of the California Building Standards Code

The current standards set forth by the CBSC (California Code of Regulations [CCR] Title 24, Part 9), including, but not limited to, the California Building Code (CBC) (CCR Title 24, Part 2) and CFC (CCR Title 24, Part 9), are adopted by reference through Davis Municipal Code Section 8.01.010. The CBC and CFC address roofing materials, automatic sprinkler systems, emergency access, access gates, sprinkler systems, fire alarms within buildings, and construction of access

roads to accommodate fire apparatus. The CFC requires that an automatic fire sprinkler and/or fire extinguishing system be installed throughout new one- and two-family dwellings.

Davis Municipal Code Section 36.08.040, Parkland Dedication

The City's standard for the provision of parkland acreage by new developments is codified in Davis Municipal Code Section 36.08.040. The standard requires dedication of 0.0131-acre of parkland per dwelling unit. Fees may be approved in lieu of parkland dedication.

Parks and Recreation Facilities Master Plan Update

In general, a parks and facilities master plan provides an overall framework to guide the dedication of parks, recreation, and related services in the community. The City's Parks and Recreation Facilities Master Plan Update was adopted by the City in 2012, and includes a 10-year plan and funding strategy that prioritizes parks and recreation capital projects determined to be necessary to maintain existing amenities, responds to community requests for enhanced opportunities, and provides for expanded facilities as the City's population grows. The Parks and Recreation Master Plan Update is implemented in cooperation with the City's recently updated City of Davis Parks and Community Services Needs Assessment, which provides a 10-year capital assessment for repair and replacement of parks and recreation facilities and identifies gaps in recreational services and infrastructure.[18]

4.12.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts related to public services and recreation associated with the proposed project. In addition, a discussion of the potential impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

In accordance with Appendix G of CEQA Guidelines, impact determinations regarding public services and recreation require consideration as to whether the proposed project 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:
    - Fire protection;
    - Police protection;
    - Schools;
    - Parks; or
    - Other public facilities.
- 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; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

[18] City of Davis. *City of Davis Parks and Community Services Needs Assessment. 2025.*

Method of Analysis

The methodology used to determine the potential impacts related to fire protection, police protection, schools, parks, and other public facilities that would occur through development of the proposed project is discussed in further detail below.

Fire Protection and Police Services

The approach to analyzing a project's potential impacts on fire protection and police protection services in accordance with CEQA is often misunderstood. Industry practice has often focused on any type of demand upon a fire or police department or district that may be generated by a project, such as an increased need for staffing, or the need for new equipment. Such considerations are important, but they are not CEQA considerations, per se. This important point can be seen by a careful reading of the language in Appendix G of the CEQA Guidelines (Section XV, Public Services). The language focuses on whether a project's increase in demand is such that a fire service or law enforcement provider would need to build new or expand existing governmental facilities in order to maintain acceptable service ratios, response times, or other performance objectives. The reason for such focus is that building new facilities, or expanding existing facilities, requires construction activities and disturbance of the physical environment, which is the focus of CEQA.

According to CEQA Guidelines Section 15002(g), a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by a proposed project. "Environment" means the physical conditions that exist within the area that would be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, or objects of historic or aesthetic significance (Public Resources Code Section 21060.5). The courts have affirmed such understanding. In the case *City of Hayward v. Board of Trustees of the California State University,* the First District Court of Appeal affirmed that the focus of CEQA analysis should be limited to physical environmental impacts related to a project.[19] The court held that, "[t]he need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate."

Based on the above, the analysis below appropriately focuses on whether the proposed project's demand upon fire protection and police protection service providers would generate the need to build new facilities or expand existing facilities, the construction of which would cause significant impacts on the environment.

Schools, Parks, and Other Public Facilities

The threshold for analyzing the proposed project's potential impacts to DJUSD facilities pertains to compliance with Proposition 1A/SB 50. Satisfaction of the Proposition 1A/SB 50 statutory requirements by a project developer is deemed to be "full and complete mitigation."

The threshold for analyzing the proposed project's impact to the City's parks and recreation facilities is related to consistency with applicable General Plan policies, as well as compliance with Davis Municipal Code Section 36.08.040 (Parkland dedication).

Because the Yolo County Library is partially funded by property taxes, State funds, and library fees, the proposed project's potential impact to other public facilities, which primarily includes the

[19] First District Court of Appeal. *City of Hayward v. Board of Trustees of the California State University*. (November 30, 2015) 242 Cal.App.4th 833.

Mary L. Stephens Davis Library and South Davis Montgomery Library, is analyzed through determining how the County's property tax, as detailed in Yolo County Code Chapter 14, County Facilities Authorization and Fee, under Title 3, Finance, applies.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to public services and recreation is based on implementation of the proposed project in comparison with the standards of significance presented above.

4.12-1 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or 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 services. Based on the analysis below, the impact is *less than significant*.

The project site is currently located within the EDCFPD in an unincorporated portion of Yolo County. Upon annexation into the City of Davis, the site would be served solely by the DFD. The nearest DFD facility to the project site is Station 33, located approximately 1.5 miles southeast of the site. As shown in Figure 4.12-1, the project site is located outside of the four-minute drive time zone. Thus, the DFD may not currently meet the NFPA 1710 response time standard when responding to fire events at the project site. However, the DFD has identified the potential need for a 2.0-acre site for a fire station in the northeastern portion of the City. If the station is not accommodated elsewhere, the proposed project has reserved land to accommodate the station on a parcel in the southwestern portion of the site, adjacent to East Covell Boulevard. The fire station would ultimately be designed and implemented by the DFD but could consist of a four-bay fire station. The fire station would have a dedicated entry and exit onto East Covell Boulevard. The physical environmental impacts of the potential construction of such a fire protection facility has been analyzed throughout this EIR.

In addition, an alternative site for the fire station is included as part of the Village Farms Davis Project, located approximately 1.04 miles to the west of the project site. Construction of the new fire station is anticipated to occur at either the project site or the Village Farms Davis Project site (if approved by the City Council and voters) and would allow the DFD to respond to on-site fire and emergency medical events within the NFPA 1710 response time standard. The physical environmental impacts associated with the construction of a fire station within the Village Farms Davis project were addressed in the associated EIR.

All structures constructed as part of the proposed project would be designed in accordance with Davis Municipal Code Section 13.01.010 and all applicable provisions of the CFC. Consistent with the CFC, the proposed project would include features, such as fire sprinklers and smoke alarms, to reduce potential fire hazards. Such features would reduce the potential for fires to occur and spread within the proposed

structures, thereby reducing the demand for fire protection services to the maximum extent feasible.

Based on the above, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection services and/or facilities, the construction of which could cause significant environmental impacts, and a ***less-than-significant*** impact could occur. It should be noted that the City may consider the timing of the fire station during the project review process. Any timing specifications related to response times would be conditioned by the City as part of project approval.

Mitigation Measure(s)
None required.

4.12-2 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or 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 services. Based on the analysis below, the impact is *less than significant*.

The project site is currently located within an unincorporated portion of Yolo County, which is provided law enforcement services by the Yolo County Sheriff's Office. Upon annexation into the City of Davis, the site would be served by the DPD. Using the 2.57 persons/household average household size for the City of Davis as noted in the City's Housing Element, the proposed 1,250 residential units would generate an estimated 3,213 new residents. While such an amount would increase the demand for DPD services, based upon correspondence with the DPD, the increase in demand could be accommodated through existing DPD facilities, and new or expanded police facilities would not be required as a result of the proposed project.[20]

The proposed project would also be designed in accordance with the City's minimum security building standards, established by Davis Municipal Code Article 8.14, including various minimum security requirements for new single- and multi-family residences, which are reviewed by the City as part of the construction documents. More specifically, Davis Municipal Code Section 8.14.050 includes security features for all residential buildings and requires all single-family residences to display a street number in a prominent location to aid approaching emergency vehicles. Features required for multi-family dwellings include self-locking devices on exterior doors, proper unit identification, properly secured garages, and lighting standards for common areas. For non-residential structures, required features include similar construction and locking requirements for exterior doors as required for residential buildings, and the use of burglar resistant glass. Davis Municipal Code Article 8.14 also includes regulations to ensure that proper lighting is provided in stairwells, walkways, and parking lots. The inclusion of the aforementioned design features would

[20] Antonia Dias, Intelligence-Led Policing (ILP) Sergeant, City of Davis Police Department. *Personal Communication [email] with Nick Pappani, Vice President, Raney Planning and Management.* September 5, 2025.

increase security at the project site, thereby minimizing security risks and reducing the project's demand for police services.

Furthermore, conduct in all City parks and greenbelts are subject to all general police regulations for the City of Davis, as well as Davis Municipal Code Chapter 27 regulating parks and open space areas. Pursuant to Chapter 27, the City has implemented several policies and codes regulating allowable conduct in parks. Such policies include but are not limited to allowed hours of use, allowed activity areas, Americans with Disabilities Act (ADA) requirements, regulations concerning animals and dogs, allowed use of bikes and skateboarding equipment, camping and overnight use, fires, fireworks, motorized vehicles, sanitation, soliciting, slacklining, and smoking.[21] Compliance with the aforementioned City policies and code would further increase security at the project site, especially within the associated park and open space areas.

In addition, the DPD obtains funds from several revenue streams through the City's General Fund, which collects from general tax dollars from sales and property taxes, motor vehicle-in-lieu fees, the municipal service tax, business license tax, and by revenues generated from permits and fees. The proposed project would contribute funding for the DPD through paying applicable City property taxes and development fees, which in addition to the payment of the City's public safety development impact fee, would constitute the project's fair share towards police protection services.

Based on the above, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection services and/or facilities, the construction of which could cause significant environmental impacts, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.12-3 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools and other public facilities. Based on the analysis below, the impact is *less than significant*.

The following discussion includes an analysis of potential impacts related to increases in the provision of DJUSD schools and other public facilities as a result of the proposed project, the construction of which could cause significant environmental impacts.

[21] City of Davis. *Conduct in Our Parks.* Available at: https://www.cityofdavis.org/city-hall/parks-and-community-services/parks-and-open-space/conduct-in-our-parks. Accessed July 2025.

Schools

The project site would be provided with school services by the DJUSD. The nearest schools to the project site include Fred T. Korematsu Elementary, located 0.34-mile to the southwest of the site; Harper Junior High, located approximately 200 feet south of the site, across East Covell Boulevard; and Davis Senior High School, located approximately 2.6 miles southwest of the site. Using the 2.57 persons/household average household size for the City of Davis, as noted in the City's Housing Element, the proposed 1,250 residential units would generate an estimated 3,213 new residents. Such an increase in population would include an associated increase in student population and an increase in demand for schools. Table 5C-6 in the General Plan EIR uses a 0.69 student generation yield rate for single-family residential uses, and 0.44 yield rate for multi-family residential uses. Based on the proposed project's division of residential units with 712 single-family residential units and 538 multi-family residential units, the proposed project could result in as many as 728 new students that would be served by the DJUSD. The estimate of 728 new students is conservative in comparison to the estimate provided by the DJUSD of 300+ new students which were anticipated as a result of the originally proposed 1,200-unit Shriners Property Project.[22]

The overall DJUSD declining enrollment rate, in combination with the consistent acceptance of IDT students, has resulted in available DJUSD capacity for new students. Davis voters' renewal of the Measure N parcel tax ensures an existing parcel tax of $768 per year, totaling approximately $11.7 million per year, is also available to help fund DJUSD facilities and services. Future residents of the proposed project would be subject to the Measure N tax and contribute to the funding of DJUSD schools. Finally, the proposed project would be subject to the DJUSD developer fees, which are currently maintained at $2.97 per sf for all residential construction and $0.47 per sf for commercial development. Payment of such fees would satisfy the requirements set forth by Proposition 1A/SB 50. Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation." Therefore, payment of the necessary DJUSD developer fees by the project applicant would be full and satisfactory CEQA mitigation.

Furthermore, a daycare facility is proposed, which would offer daycare services and childcare. The daycare facility would not help address school services for the number of new students generated by the new residential units. However, the daycare facility would help with daycare and childcare needs generated by the new residential units.

Based on the above, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school services and/or facilities, the construction of which could cause significant environmental impacts.

[22] Davis Joint Unified School District. *Boundaries & Planning.* April 2025.

Other Public Facilities

Residents of the proposed project would have access to the Mary L. Stephens Davis Branch Library, located at 315 East 14th Street, approximately 2.31 miles southwest of the project site and the South Davis Montgomery Library, located at 1441 Danbury Street, approximately 1.7 miles south of the site. In addition, the Yolo County Library is actively planning a new Davis branch library known as the Walnut Park Library approximately 1.8 miles south of the project site at 2700 Lillard Drive.

While the anticipated increase to the City's population of 3,213 new residents associated with the proposed project could result in increased demand for Yolo County Library services, future residents of the project would be subject to the County property taxes. Pursuant to Chapter 14, County Facilities Authorization and Fee, in Title 3, Finance, of the Yolo County Code, the tax is imposed on residential projects and commercial development within the County. Revenues generated by Yolo County property taxes are used for countywide library programs and operations. In addition, the City of Davis passed Measure T on November 5, 2024.[23] Measure T increased the annual special library tax by $49.00 per parcel and/or by $24.50 per unit for multi-family developments. Payment of annual property taxes pursuant to the Yolo County Code and the City's Measure T would ensure the proposed project does not result in an adverse physical impact related to new or physically altered library facilities, the construction of which would result in environmental impacts.

Conclusion

Based on the above, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities or other public service facilities, the construction of which could cause significant environmental impacts. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.12-4 Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks; or result in an increase in 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, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Based on the analysis below, the impact is *less than significant*.

[23] Ballotpedia. *Davis, California, Measure T, Library Operation Measure (November 2024)*. Available at: https://ballotpedia.org/Davis,_California,_Measure_T,_Library_Operation_Measure_(November_2024). Accessed May 2025.

As previously discussed, the proposed project is anticipated to generate approximately 3,213 new residents, which would increase the demand for parkland facilities in the area. Based on the parkland provision requirements established by Davis Municipal Code Section 36.08.040, the proposed project would be required to provide at least 16.38 acres of parkland (0.0131 acres of parkland x 1,250 residential units = 16.38 acres).

The proposed project would include 19.2 acres of park uses consisting of a community park, mini-park, and dog park, which would satisfy both the General Plan and Municipal Code parkland requirements with an approximately 2.8-acre parkland overage. Furthermore, such City parks would be located within and immediately adjacent to the proposed residential development. Thus, pursuant to the City's Parks and Recreation Facilities Master Plan Update, the proposed City parks would be located within 1.5 miles and the neighborhood greenbelt would be located within three eighths of a mile of the proposed residential uses, as shown in Figure 3-16 of Chapter 3, Project Description, of this EIR. As such, the potential increase in demand for park facilities associated with the potential population growth would be met through the components of the proposed project.

In addition, according to General Plan Action POS 3.1(l), greenbelt requirements should be calculated separately from park acreage dedication or in-lieu fee payment requirements that are specifically authorized by the Quimby Act (Government Code Section 66477). The City standard for greenbelt provision is related to the General Plan's overall open space provision requirement, which requires 10 percent of newly developing residential land to be developed as open space, primarily greenbelt. Based on 104.7 acres of residential acreage, the proposed project would be required to provide at least 10.47 acres of neighborhood greenbelt (104.7 acres x 0.1 = 10.47 acres). As provided in Figure 3-16 of Chapter 3, Project Description, of this EIR, the proposed project would include approximately 8.7 acres of greenbelts. The provided greenbelts would comprise approximately eight percent of the urban development area. As discussed in Chapter 3, Project Description, of this EIR, the greenbelts would generally provide connection between parks, residential and neighborhood areas, and the Urban Agricultural Transition Area (UATA). General Plan Policy POS 3.1(m) allows 20 percent of the greenbelt requirement to be provided through parkland or open space dedication. As such, up to 2.1 acres of parkland or open space could contribute to the overall greenbelt requirement. In order to meet the greenbelt requirement, 2.1 (10.47 x 0.2) acres of the 2.8-acre parkland overage would be added to the 8.7 acres of proposed greenbelt area for a total of 10.8 acres of provided greenbelt and parkland area. Thus, the combined greenbelt and parkland area would comprise approximately 10 percent of the urban development area, thereby meeting the greenbelt requirement. Therefore, the proposed project would satisfy the City of Davis open space requirements for new development projects.

Furthermore, the proposed project includes a 44.3-acre UATA, located along the northern and eastern boundaries of the site, that would act as a buffer between the new on-site development and the existing agricultural land further to the north. The UATA would include open space trail connections to the existing Wildhorse Agricultural Buffer to the west of the project site, and would include 10-foot-wide shared-use paths, connecting to existing City of Davis trails to the west and northeast

of the project site. In accordance with Davis Municipal Code Section 40A.01.050(b), the UATA would provide a minimum width of 150 feet for the UATA.

Based on the above, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, the construction of which could cause significant environmental impacts. The proposed project would additionally 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, or include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The cumulative setting for impacts related to public services and recreation encompasses buildout of the proposed project in conjunction with the development of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.12-5 Cumulative impacts to public services. Based on the analysis below, the cumulative impact is *less than significant*.

The cumulative analysis in this EIR is based upon development of the proposed project, in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. In addition to the proposed project, Village Farms Davis, a 497.6-acre mixed-use development project located north of the East Covell Boulevard, east of F Street, and west of Pole Line Road, is currently under review by the City. Just west of the proposed project, north of the East Covell Boulevard/Monarch Lane intersection, is the approved and under construction Palomino Place Project, which is located on a 25-acre site and would include single- and multi-family housing, as well as health and training facilities with memberships that would be open to the public. Other development projects undergoing planning review are located in the southern portion of the City, including two new multi-family residential apartment buildings, a new commercial hotel building, and a 700-unit residential neighborhood located on the 46.9-acre site formerly known as the Nishi Housing Site. The Bretton Woods project, a senior residential community located northwest of the West Covell Boulevard/Risling Place intersection, has been approved by the City of Davis. Finally, the City of Davis previously approved the Davis Innovation and Sustainability Campus (DiSC) 2022 Project, which was proposed for a 185-acre

site located immediately east of the City of Davis City Limits, near the "Mace Curve." The DiSC project was subject to voter approval and did not pass.

The following discussion includes an analysis of potential impacts related to potential increases in demand for public services as a result of the proposed project, in combination with future buildout of the City of Davis and the aforementioned present and probable future projects. Potential cumulative impacts related to fire and police protection services, schools, parks and recreation, and other public facilities are discussed in further detail below.

Fire Protection Services

Cumulative development, in conjunction with the proposed project would increase the demand for fire protection services provided by the DFD. As discussed above, the required response time standard for the DFD is six minutes (with a four-minute drive time) for more than 90 percent of all incidents, consistent with the NFPA 1710 response time standard.

The City funds the DFD budget, in part, through revenues generated by the City's General Fund, which collects funds from building permits and development impact fees, and from public safety development impact fees. Similar to the proposed project, cumulative development within the City's General Plan planning area would be subject to applicable permits and fees, which would be reviewed by the City to ensure payment. Therefore, revenues generated through fee payments associated with cumulative development would pay fair shares toward any new DFD facilities deemed necessary by the City, which would be required to be designed and constructed in accordance with applicable regulations and standards, and if necessary, undergo CEQA review. In addition, as discussed above, all structures included as part of buildout of the City's General Plan would be constructed in compliance with the CBC and CFC, which would reduce the potential for fires to occur within the planning area and thereby reduce the demand for fire protection services in the City.

Finally, the proposed project would potentially include construction of a new fire station. An alternative site for the fire station is included as part of the nearby proposed Village Farms Davis Project, wherein a new fire station would be constructed along the East Covell Boulevard, approximately 2.07 miles west of the project site. Construction of the new fire station at either site would allow the DFD to respond to fire events at the project site and the eastern portion of the City Limits within the NFPA 1710 response time standard. All potential physical environmental impacts that could result from the development of the proposed project, including the potential new fire station, have been evaluated throughout the technical chapters of this EIR. The potential environmental impacts of the fire station construction have also been analyzed within the EIR prepared for the Village Farms Davis Project.

Based on the above, cumulative development within the City of Davis, in conjunction with the proposed project, would result in a less-than-significant impact related to the need for new or improved fire protection facilities, the construction of which could cause significant environmental impacts.

Police Protection Services

Cumulative development, in conjunction with the proposed project, would increase the demand for police protection services provided by the DPD. Similar to the DFD, the DPD is funded, in part, through the City's General Fund and public safety development impact fee. Cumulative development within the City would be subject to applicable permit application and development impact fees. Additionally, new residents generated by cumulative development would be subject to local taxes. Thus, future projects and residents would pay fair shares toward new DPD facilities deemed necessary by the City, all of which would be required to be designed and constructed in accordance with applicable regulations and standards, and if necessary, undergo CEQA review.

In addition, cumulative development within the City would be designed in accordance with the minimum security building standards established by Davis Municipal Code Article 8.14. The City of Davis requires various security measures to be included in new structures, and reviews development construction documents for consistency. Implementation of the required security measures would help to reduce cumulative demand for police protection services.

Based on the above, cumulative development within the City, in conjunction with the proposed project, would result in a less-than-significant impact related to the need for new or improved police protection facilities, the construction of which could cause significant environmental impacts.

Schools

Cumulative development, in conjunction with the proposed project, would increase the demand for school services provided by the DJUSD. However, as discussed above, development as part of cumulative buildout would be subject to DJUSD developer fees, which fund the cost of improving and expanding school facilities and equipment needed to accommodate additional student population induced by new development. Payment of the fees would be deemed to be "full and complete mitigation," as established by Proposition 1A/SB 50. In addition, Davis voters' renewal of the Measure N parcel tax ensures an existing parcel tax of $768 per year, totaling approximately $11.7 million per year, is available to help fund DJUSD facilities and services. Future development would increase the number of parcels subject to the tax.

Based on the above, cumulative development within the City, in conjunction with the proposed project, would result in a less-than-significant impact related to the need for new or improved school facilities, the construction of which could cause significant environmental impacts.

Parks and Other Facilities

Cumulative development, in conjunction with the proposed project, would increase the demand for park facilities operated by the City of Davis Parks and Community Services Department. However, development facilitated by buildout of the General Plan planning area would be subject to the City's parkland provision requirements as established by Davis Municipal Code Section 36.08.040. With respect to libraries, revenues generated by Yolo County property taxes, State funds, and library fees are used to fund countywide library programs and operations. Cumulative development

within the area would be required to be designed and constructed in accordance with applicable regulations and standards, pay all applicable fees and taxes, and if necessary, undergo CEQA review.

Based on the above, cumulative development within the City, in conjunction with the proposed project, would result in a less-than-significant impact related to the need for new or improved parks and/or other public facilities, the construction of which could cause significant environmental impacts.

Conclusion

Based on the above, development of the proposed project in combination with cumulative development in the City of Davis would result in a ***less-than-significant*** cumulative impact related to public services and recreation.

Mitigation Measure(s)

None required.

4.13. Transportation

4.13 TRANSPORTATION

4.13.1 INTRODUCTION

The Transportation chapter of the EIR discusses the existing transportation facilities within the vicinity of the project site, focusing on pedestrian, bicycle, and transit facilities, as well as applicable policies and guidelines used to evaluate operation of such facilities. Where development of the proposed project would conflict with applicable policies or guidelines, mitigation measures are identified. The information contained within this chapter is primarily based on the Transportation Impact Study (TIS) prepared for the proposed project by Fehr & Peers (see Appendix Q),[1] as well as the City of Davis General Plan[2] and the City of Davis General Plan EIR.[3]

Pursuant to the CEQA Guidelines Section 15064.3, environmental documents must use vehicle miles traveled (VMT) rather than level of service (LOS) as the metric to analyze transportation impacts. Therefore, the analysis included in this chapter focuses on VMT. The State's requirement to transition from LOS to VMT is aimed at promoting infill development, public health through active transportation, and a reduction in greenhouse gas (GHG) emissions. However, an analysis of LOS in the project-specific Local Transportation Analysis (LTA) prepared by Fehr & Peers will be used by the City in the project review process for determining consistency with General Plan goals and policies.

4.13.2 EXISTING ENVIRONMENTAL SETTING

The sections below describe the physical and operational characteristics of the existing transportation system within the project site vicinity, including the surrounding roadway network, transit, bicycle, and pedestrian facilities. The TIS includes terminology such as "study area," which includes the site and the vicinity, and was determined based on the project's expected travel characteristics (trip generation and distribution), primary travel routes to and from the site, and travel mode split. A larger study area extending throughout Yolo County is also used for the analysis of potential VMT impacts.

Existing Roadways

The following sections provide a summary of the existing roadways in the project site vicinity, as shown in Figure 4.13-1. According to the TIS prepared for the proposed project, the peak hours of travel are from 7:45 AM to 8:45 AM and from 4:30 PM to 5:30 PM.

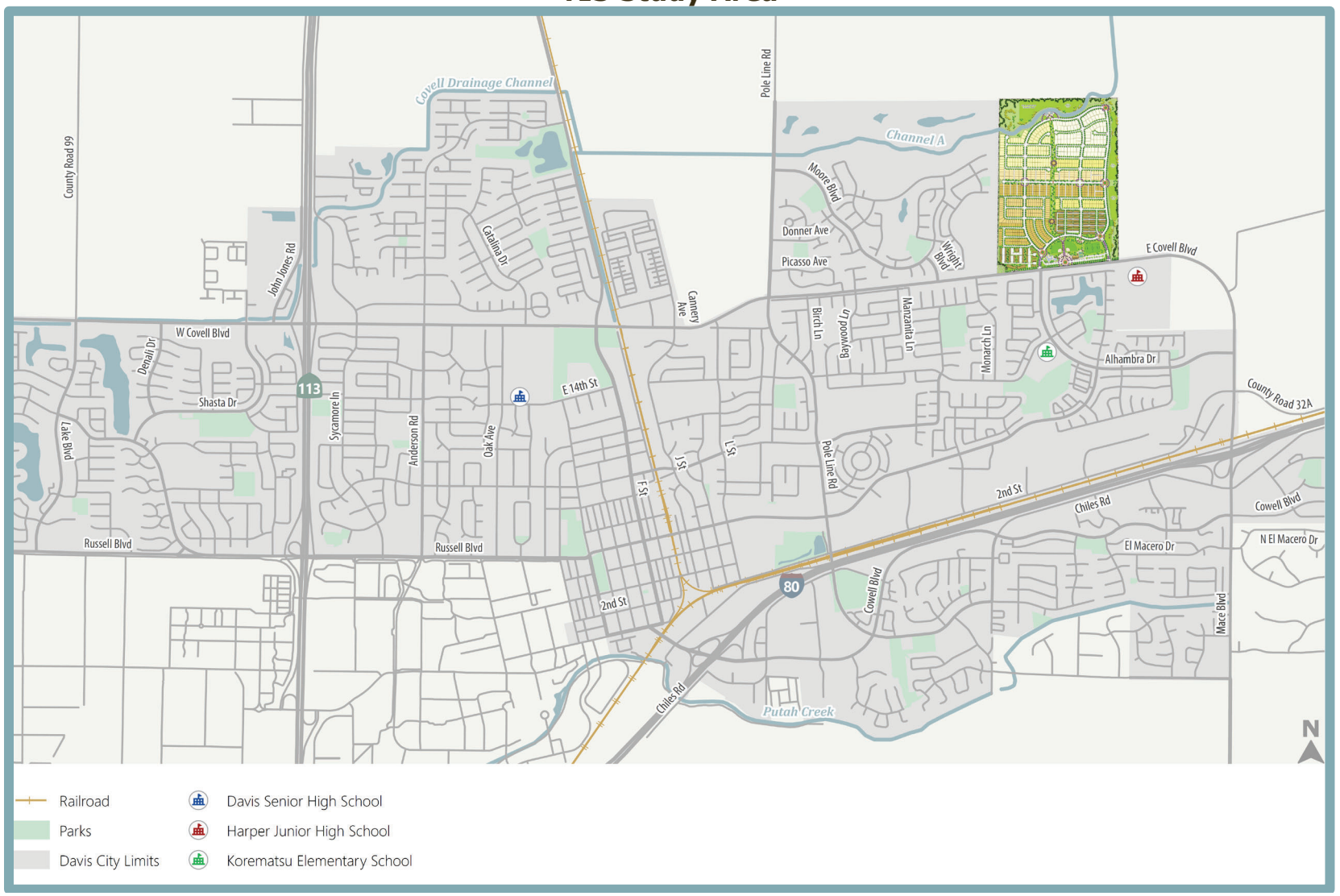
East Covell Boulevard

East Covell Boulevard is a four-lane east-west major arterial that traverses the City of Davis. The roadway begins west of State Route (SR) 113, has an interchange with SR 113, and intersects with several primary north-south roads in the City, including Anderson Road, F Street, J Street, and Pole Line Road.

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1 Fehr & Peers. *Willowgrove Project Transportation Impact Study*. September 2025.
2 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
3 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.

Figure 4.13-1
TIS Study Area



Source: Fehr & Peers, 2025.

*Figure not OCR compatible.

The eastbound roadway consists of two travel lanes for 1.75 miles, narrowing to a single lane at the east of Frances Ellen Watkins Harper Junior High School (Harper Junior High). The roadway continues as a single lane for another 1,575 feet to County Road (CR) 104 where East Covell Boulevard becomes Mace Boulevard. East Covell Boulevard has a posted speed limit of 35 miles per hour (mph) east of Pole Line Road, which increases to 40 mph east of Wright Boulevard. On-street parking is prohibited along this segment of roadway.

The westbound roadway is comprised of a single travel lane for approximately one mile starting at CR 104, including along the project site frontage. The roadway widens to include a second lane along the Wildhorse neighborhood and continuing to Pole Line Road, for a distance of approximately 5,160 feet. Westbound East Covell Boulevard has a posted speed limit of 40 mph at CR 104 before decreasing to 35 mph west of Wright Boulevard.

The eastbound and westbound lanes are generally separated by either a landscaped median or left-turn lane at an intersection. The most easterly 1,575 feet of the roadway consists of an approximately 12-foot-wide pavement delineated by a pair of double-yellow lines implemented in 2024. Vehicular access to and from the site is provided by existing dirt access roads that connect to East Covell Boulevard. Within the vicinity of the site, East Covell Boulevard has a posted speed limit of 40 mph.

During the morning peak hour, the segment of East Covell Boulevard east of Alhambra Drive carried 648 eastbound vehicles and 395 westbound vehicles. During the evening peak hour, the segment carried 705 eastbound vehicles and 516 westbound vehicles. According to the TIS, such traffic flow characteristics are atypical in that the eastbound direction is busier during both peak hour periods. The difference is likely due to directional congestion on I-80 through the City.

Mace Boulevard

Mace Boulevard is a two- to four-lane north-south major arterial. Mace Boulevard transitions from East Covell Boulevard at the Mace Curve and extends south with connections to Interstate 80 (I-80), South Davis, and points to the south. Mace Boulevard is four lanes on the segment between Alhambra Drive and Cowell Boulevard and two lanes north and south of this segment. Mace Boulevard has a posted speed limit of 35 mph immediately north of I-80 and 40 mph north of Second Street.

Pole Line Road

Pole Line Road is a two-lane north-south road that connects East Davis and South Davis across I-80. Pole Line Road is a major arterial north of East Covell Boulevard and a minor arterial south of East Covell Boulevard. Pole Line Road transitions into Lillard Drive south of I-80 and into CR 102 north of the City Limits. CR 102 continues north to the City of Woodland and Interstate 5 (I-5). Pole Line Road has a posted speed limit of 40 mph north of East Covell Boulevard and 25 mph south of East Covell Boulevard.

Alhambra Drive

Alhambra Drive is a two-lane minor arterial roadway extending southeast from East Covell Boulevard to Mace Boulevard. Approximately halfway, the roadway intersects 5th Street, which extends westerly into Downtown Davis and becomes Russell Boulevard. The posted speed limit on Alhambra Drive is 30 mph. According to the TIS, traffic volumes on Alhambra Drive (in both directions) total about 300 AM peak hour vehicles and 275 PM peak hour vehicles.

East Covell Boulevard/Alhambra Drive Intersection

The signalized T-intersection at East Covell Boulevard and Alhambra Drive would be the primary access serving the project site. The eastbound approach consists of two through lanes and one right-turn lane featuring a yield-controlled channelized movement. The westbound approach is comprised of one through lane and a 120-foot left-turn lane (that permits u-turns). The northbound approach consists of an approximately 20-foot-wide single lane that allows motorists to either turn left onto westbound East Covell Boulevard or use the yield-controlled channelized right-turn to head eastbound. The only crosswalk present is on the south leg. Bicycle detection is provided on all approaches. The signal operates with protected left-turn phasing (i.e., a green arrow for the protected westbound left-turn).

State Route 113

SR 113 is a four-lane, north-south freeway that extends from I-80 at the Yolo/Solano County line north to I-5 in Woodland. SR 113 serves Davis by way of interchanges at Covell Boulevard and Russell Boulevard. Additional SR 113 interchanges within the vicinity of Davis include the Hutchison Drive interchange at the UC Davis campus and the CR 29 interchange in Yolo County. SR 113 and its interchanges are owned and operated by the California Department of Transportation (Caltrans).

Interstate 80

I-80 is an east-west interstate freeway south of the project site. From Davis, I-80 connects with the San Francisco Bay Area to the west and Sacramento and the Lake Tahoe Basin to the east. I-80 provides three travel lanes per direction in the vicinity of the site. I-80 serves Davis by way of interchanges at Mace Boulevard and Richards Boulevard. Additional I-80 interchanges within the vicinity of Davis include the Old Davis Road interchange at the UC Davis campus and the CR 32A interchange in Yolo County. I-80 and its interchanges are owned and operated by Caltrans.

Existing Pedestrian Facilities

Pedestrian facilities are comprised of crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities. The City of Davis has an extensive system of off-street shared-use paths and sidewalks available for use by pedestrians, including the following existing facilities within the project site vicinity:

- Class I shared-use path on the north side of East Covell Boulevard beginning just west of the project's western site boundary and extending westerly for one mile to Pole Line Road.
- Class I shared-use path on the south side of East Covell Boulevard that extends for 0.9-mile from just east of Manzanita Lane to Harper Junior High.
- Sidewalks are located on both sides of Alhambra Drive.

Pedestrian crossings of existing roadways serving the project site are accommodated as follows:

- Pedestrians may cross from one side of East Covell Boulevard to the other by way of a pedestrian/bicycle underpass located at the westerly edge of the project site.
- The East Covell Boulevard/Alhambra Drive intersection has a crosswalk (with push button activation) on the south leg only. Pedestrians may not cross East Covell Boulevard at Alhambra Drive.

Existing Bicycle Facilities

The City of Davis bicycle network is comprised of an extensive network of on- and off-street bicycle facilities. Bicycle facilities are classified into four types, as described below:

- **Class I Multi-Use Off-Street Paths** (also known as shared-use paths) are paved trails that are separated from roadways, and allow for shared use by both cyclists and pedestrians;
- **Class II On-Street Bike Lanes** are designated for use by bicycles by striping, pavement legends, and signs;
- **Class III On-Street Bike Routes** are designated by signage for shared bicycle use with vehicles but do not necessarily include any additional pavement width for bicyclists.
- **Class IV Separated Bikeways** (also known as protected bikeways or cycle tracks) are separated bikeways designed to improve upon buffered bike lanes by providing vertical separation between bike lanes and the adjacent travel lanes. Vertical separation can be provided with concrete curb and gutter, bollards, or on-street parking.

Figure 4.13-2 displays existing bicycle facilities in the project site vicinity.

In addition to the previously discussed shared-use paths, bicycle facilities are provided on the following roadways near the site:

- Class II bike lanes in both directions of East Covell Boulevard and Alhambra Drive.
- Bicycle underpass under East Covell Boulevard near the southeast corner of the project site.

East Covell Boulevard, which traverses the southerly project site boundary, is the only continuous east-west arterial that traverses the entire City of Davis. Bicyclists using the Class I Shared-Use path on the south side of East Covell Boulevard must enter the street and wait at a pair of channelized right-turn islands at the signal at Alhambra Drive. To facilitate bicycle and pedestrian travel across this roadway, the City of Davis has required the construction of bicycle/pedestrian grade separations for new developments located on the north side of Covell Boulevard. Existing grade separations on Covell Boulevard are located west of F Street, east of F Street (to/from The Cannery), and east of Monarch Lane. According to the City's General Plan, a future facility is planned on West Covell Boulevard east of Denali Drive.

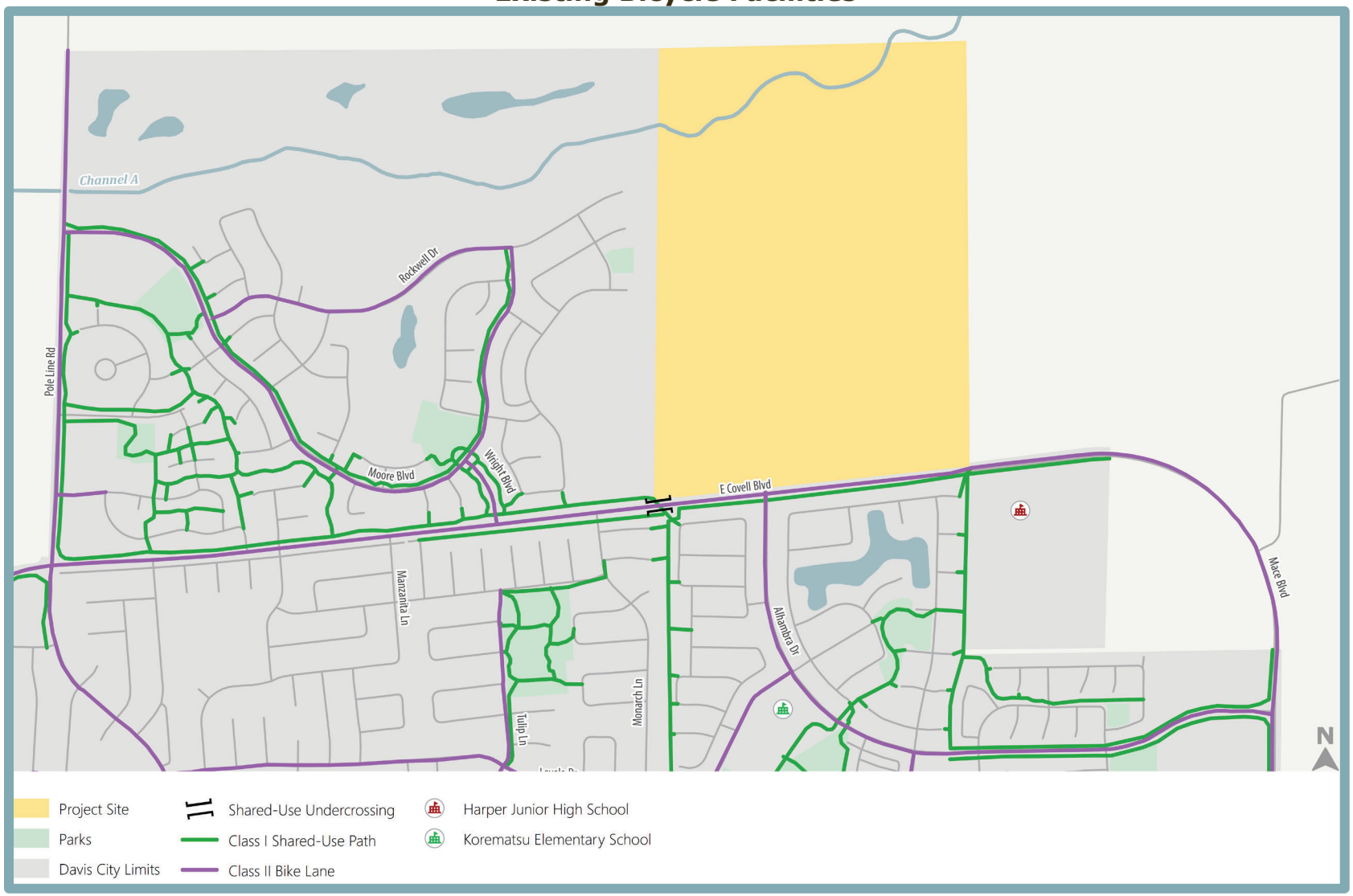
Transit Service and Facilities

Transit serving the project site includes local bus service connecting the site to destinations throughout the City of Davis (e.g., Downtown Davis, the Davis Train Depot, etc.) and the UC Davis campus. Additionally, the site is served by an intercity bus service that is primarily oriented towards serving Davis residents commuting to and from work in Downtown Sacramento. Transit service in the City of Davis is provided by Unitrans (local bus), Yolobus (intercity bus), Amtrak (intercity rail), and Davis Community Transit (local paratransit) (see Figure 4.13-3).

Unitrans

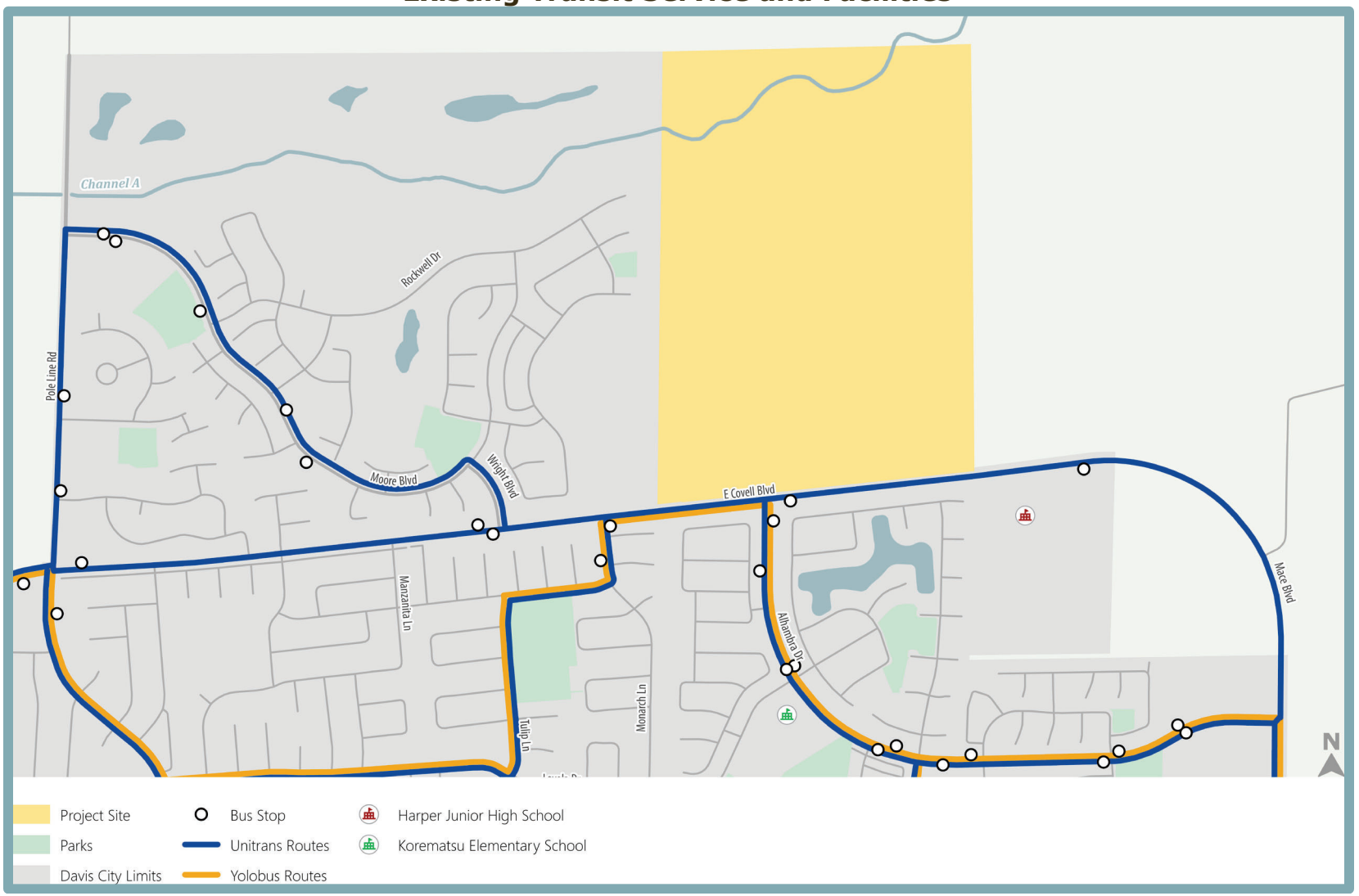
Unitrans provides local fixed route bus service to the project site. Jointly operated between the Associated Students, UC Davis (ASUCD) and the City of Davis, Unitrans offers 21 lines serving the UC Davis campus and City of Davis neighborhoods, shopping centers, schools, and medical centers.

Figure 4.13-2
Existing Bicycle Facilities



Source: Fehr & Peers, 2025.

Figure 4.13-3
Existing Transit Service and Facilities



Source: Fehr & Peers, 2025.

Unitrans operates as a radial bus system with the UC Davis campus serving as the central hub. The main terminals on the UC Davis campus are at the Memorial Union on Howard Way and at the Silo on Hutchison Drive.

Specific service spans and frequencies vary by route. Generally, Unitrans operates from 6:30 AM to 11:00 PM, Monday through Thursday, and until 9:00 PM on Fridays. Weekend service is available from 8:00 AM to 7:00 PM. Unitrans routes operate every 15 to 60 minutes during weekdays and every 60 minutes during weekends and evenings. Table 4.13-1 summarizes the weekday and weekend frequency and span for Unitrans bus routes serving the project site.

Table 4.13-1
Unitrans Route Summary – Project Site Vicinity

Route	Weekday		Friday		Weekend	
	Peak Frequency (min)	Span	Peak Frequency (min)	Span	Peak Frequency (min)	Span
L – East 8th/Pole Line/Moore/ Loyola	30*	6:30 AM to 11 PM	30*	6:30 AM to 9 PM	--	--
P – MU/Davis Perimeter CCW	30*	6:30 AM to 11 PM	30*	6:30 AM to 9 PM	60	8 AM to 7 PM
Q – MU/Davis Perimeter CW	30*	6:30 AM to 11 PM	30*	6:30 AM to 9 PM	60	8 AM to 7 PM

Note: CCW = counterclockwise; CW = clockwise.
* Frequency becomes hourly starting at 7:00 PM.

Source: Fehr & Peers, 2025.

The current Unitrans one-way fare is $1.50, with monthly, quarterly, and annual passes available at a discounted price. Free rides are available to UC Davis undergraduate students (fee assessed quarterly with registration), seniors, disabled passengers, and students age five to 18 years old.

The City of Davis Short Range Transit Plan indicates that 91 to 95 percent of all Unitrans riders are UC Davis undergraduate students, three to six percent of riders are UC Davis graduate students, and just over five percent of riders are not UC Davis affiliates.

Yolobus

Yolobus provides fixed route bus and paratransit service throughout Yolo County, as well as commuter bus service to downtown Sacramento. Single rides are available for $2.00, $2.25, and $3.25 for local, intercity, and express services, respectively. Discounted daily and monthly passes are also available.

The project site is served by Yolobus express bus Route 43, which is oriented towards serving Davis residents working in Downtown Sacramento (i.e., morning service is eastbound-only, and afternoon/evening service is westbound-only).

Amtrak

Amtrak serves the Davis Transit Depot near Second and G Streets in downtown Davis, approximately two miles southwest of the project site. Amtrak Capitol Corridor service is available at the depot, connecting passengers to Sacramento and Roseville to the east and the Bay Area to the west. Currently, 12 daily Capitol Corridor roundtrips are available at the station during

regular weekday service. In addition to regular Capitol Corridor service, Amtrak serves the Davis Transit Depot with daily Coast Starlight service (to Los Angeles and Seattle) and intercity bus connections to other Amtrak rail lines (e.g., the Amtrak San Joaquin lines at Sacramento Valley Station).

Figure 4.13-3 displays the bus stops and routes serving the project site vicinity. The primary bus stops serving the site are located on East Covell Boulevard (served by Unitrans Route L, P, and Q, and Yolobus Route 43).

Emerging Transportation Technology and Travel Options

Transportation and mobility are being transformed through a number of forces ranging from new technologies, different personal preferences, and the unique effects of the COVID-19 pandemic, the combination of which could alter traditional travel demand relationships in the near- and long-term. These disruptive trends increase uncertainty in forecasting future travel conditions, especially considering that new technologies such as automated vehicles (AVs) may be operating on future transportation networks once the project would be complete and operational. Information about how technology is affecting and will affect travel is accumulating over time.

- **COVID-19 pandemic**. The COVID-19 pandemic and subsequent actions by federal, State, and local governments to curtail mobility and encourage physical distancing (i.e., limit in-person economic and social interactions) temporarily but profoundly changed travel conditions. While travel activity has returned to some form of normality as the pandemic has subsided, it is possible that some of these temporary changes will influence people's travel choices into the future, including either accelerating or diminishing some of the emerging trends in transportation that were already underway prior to the pandemic. Some of the emergent changes already influencing travel behavior that could accelerate in the future include the following:

    - Substituting telework for in-office work/commute travel.
    - Substituting internet shopping and home delivery for some shopping or meal-related travel.
    - Substituting participating on social media platforms for social/recreational travel.
    - Substituting telemedicine appointments for eligible in-person medical appointments.

- **Using new travel modes and choices.** Transportation network companies such as Uber and Lyft, car sharing, bicycle/scooter sharing, and on-demand microtransit services have increased the options available to travelers in the Sacramento area and have contributed to changes in traditional travel demand relationships. For example, combined bus and rail ridership on SacRT declined by approximately 19 percent between 2016 and 2019 (prior to the COVID-19 pandemic) and by approximately 54 percent between 2016 and 2022 (after the COVID-19 pandemic). The travel demand model used for the TIS, known as SACSIM19 and discussed in further detail below, was calibrated to 2016 conditions and may not fully capture all the factors influencing transit ridership declines today or in the future.

- **Automation of vehicles**. Both passenger vehicles and commercial vehicles and trucks are evolving to include more automation. Research, development, and deployment testing is proceeding on AVs; AVs do not require an operator and navigate roadways

autonomously. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and marketing of AVs vary widely both on the pace of the transition and the market acceptance of fully automated operation. More uncertainty exists around the behavioral response to AVs. In terms of VMT impacts on the transportation system and the environment, the worst-case scenario would be one in which AVs are privately owned, as they are now, but the automated function of AVs would cause them to be used more, as described below.

AVs could be repositioned to serve different members of a household (e.g., have an AV drop a worker at their workplace, then drive back home empty to serve another trip such as taking a student to school). The repositioning of AVs could add significantly to traffic volumes and VMT.

AVs could reduce the value travelers place on time spent in a vehicle, resulting in an increase in willingness to make longer trips. For example, if a person could read or do work in an AV instead of focusing on driving, they might be willing to commute longer distances to work. Conversely, a worker who would prefer to live in a rural area but is unwilling to drive far enough to act on that preference in a conventional vehicle may be willing to do so using an AV.

AVs could increase willingness to drive more to avoid parking costs or tolls. For example, a person going to a sporting event in an area that charges for parking might use an AV to be dropped off at the venue, and then re-position and park the AV in an area that does not charge for parking.

- **Connected vehicles.** Connected vehicles (CVs) can communicate wirelessly with its surroundings, including other vehicles, bicyclists, pedestrians, roadway infrastructure (i.e., traffic signals, toll facilities, and traffic management facilities), and the internet. The influence that CVs may have is still speculative but includes potential for reductions in collisions and congestion and greater overall network performance optimization.

- **Navigation apps.** The increased prevalence and use of navigation apps (e.g., Google Maps, WAZE, etc.) in recent years provides motorists with real-time and predictive travel time information that can influence route selection. The use of navigation apps can result in changes to travel patterns and traffic volumes during different times of the day and days of the week, particularly during recurrent congested time periods or when incidents occur that affect travel times (e.g., a crash on the freeway that requires lane closures). Diverted local and regional traffic can occur on roadways near the project site during extended periods of very low travel speeds on eastbound I-80 from the causeway, through Davis, and into Solano County. During congested conditions, low mainline travel speeds substantially increase travel times for motorists on eastbound I-80. Hence, diverting from I-80 onto local roadways such as Covell Boulevard and Mace Boulevard often provides a faster alternative to remaining on the freeway through Davis. Similarly, locally generated traffic using eastbound I-80 can experience faster travel times by accessing I-80 as far east as possible (e.g., motorists departing Downtown Davis for Sacramento accessing I-80 at Mace Boulevard or CR 32A instead of Richards Boulevard).

While the SACSIM19 model represents state of the practice or advance practice, travel behavior and transportation systems are changing quickly in response to emerging trends, new



technologies, and different preferences. The trajectory of deployment, market acceptance, and government regulation of the new travel options and technologies is difficult to predict, and such elements directly influence the inputs and algorithms for the SACSIM19 model. As such, SACSIM19 as a travel forecasting model has limitations in the ability to capture the full range of potential travel effects from emerging travel options and technologies.

The SACSIM19 model does include some scenario testing capabilities that can begin to test different hypotheses of aforementioned impacts, but until more research is done about the likely behavioral responses to new modes and technologies is completed, travel models cannot fully capture such changes in a reliable way. Initial testing of AVs effects using SACSIM19, such as lowering costs to use vehicles and making them more convenient by eliminating parking at trip ends, does generate increases in overall vehicle travel and reductions in transit ridership with all else being equal. The information suggests the model is sensitive to how cost and convenience influence travel behavior but within the limits of the observed data used to develop the model.

Vehicle Miles Traveled

VMT is a measure of the total amount of vehicle travel occurring on a given roadway system. VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. For analysis purposes, VMT refers to automobile VMT, specifically passenger vehicles and light trucks; heavy truck traffic is typically excluded. VMT does not directly measure traffic operations; instead, VMT is a measure of transportation network use and efficiency, especially when expressed as a function of population (i.e., VMT per capita). The key VMT metric used for the following analysis is residential VMT per capita, which is defined as all automobile (i.e., passenger cars and light-duty trucks) vehicle-trips that start or end at the home, but non-home-based trips made by residents elsewhere on the network are excluded.

As a result of Senate Bill (SB) 743, passed in 2013, local jurisdictions may not rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. Thus, consistent with the CEQA Guidelines, VMT is the primary metric used to identify transportation impacts to roadway systems within this chapter. The City of Davis has not yet adopted VMT procedures or standards.

The VMT estimates and forecasts contained in this analysis were obtained from the Sacramento Area Council of Governments (SACOG) travel demand model, known as SACSIM19. According to SACSIM19, existing residential VMT per capita for the City of Davis and SACOG region is 30.1 and 21.7 VMT per capita, respectively. Residential VMT per capita generated by existing residential uses within the project site vicinity (e.g., the Wildhorse neighborhood, Mace Ranch, etc.) is approximately 31 VMT per capita, three percent above the existing City average and 43 percent above the existing SACOG average. For reference, existing residential VMT per capita in more centrally located Davis neighborhoods such as Central Davis and Old East Davis measures in the range of 25 to 27 VMT per capita. The rates thereby indicate that placement of residential land use relative to employment, schools, and goods and services has a major influence on per capita VMT.

Nearby Schools

Two schools are located in close proximity to the project site: Korematsu Elementary School along Alhambra Drive south of the project site, and Harper Junior High along East Covell Boulevard southeast of the project site.

Bike lanes and sidewalks are provided on both sides of Alhambra Drive from the project site to Korematsu Elementary School. A "School Crossing" advisory sign and a "25 mph When Children Are Present" speed limit sign are located on southbound Alhambra Drive approaching the school. Similar treatments are present in the northwest direction of Alhambra Drive approaching the school. Korematsu Elementary School provides instruction for students in grades pre-kindergarten (pre-K) through sixth grade. On all weekdays except Wednesdays, grades one through six begin instruction at 8:30 AM. Instruction ends for grades one through three at 2:35 PM and grades four through six at 3:05 PM. Kindergarten and pre-K classes have shorter instruction periods.

Harper Junior High is served by a westerly full-access signalized intersection located approximately 160 feet east of the eastern project site boundary. A right in/out driveway is provided 470 feet east of the full-access driveway. Signs are posted on the north side of East Covell Boulevard indicating that parking is prohibited, while signs are posted along the school frontage on the south side indicating that vehicles may not stop. The signalized access driveway does not have a crosswalk across East Covell Boulevard. A "School Crossing" advisory sign and "25 mph When Children Are Present" speed limit signs are located in both directions of East Covell Boulevard approaching the school. Harper Junior High provides instruction for students in grades seven through nine. On all weekdays except Wednesdays, instruction begins at 8:30 AM and ends at 3:25 PM.

Collision History

The collision history along East Covell Boulevard from Wright Boulevard to the Harper Junior High full access driveway was analyzed using the Transportation Injury Mapping System (TIMS) database. The TIMS database is a free and publicly available dataset of reported injury collisions on local and State roadways. As part of the TIS prepared for the proposed project, TIMS data was obtained for the four-year period from January 1, 2021, through December 31, 2024. The dataset provides numerous variables associated with each injury collision including: time of day; day of week; date; primary collision factor; collision type; number of involved parties; collision severity; weather conditions; lighting; pavement conditions; involvement of bicyclist, pedestrian, or motorcycle; driver impaired; and driver age and gender. The TIMS database classifies collisions as either fatal, severe, or injury-only. Key findings from the four years of collision data reviewed as part of the TIS are as follows:

- Injury collisions were reported on East Covell Boulevard at the following roads: two at Wright Boulevard; two at Monarch Lane; one at Alhambra Drive; one at the Harper Junior High Signalized Driveway; and two at mid-block locations.
- The collision at the East Covell Boulevard/Alhambra Drive intersection was a rear-end collision in the westbound direction.
- One collision at the East Covell Boulevard/Monarch Lane intersection involved an eastbound bicyclist who was struck by a vehicle turning from East Covell Boulevard under dark conditions.
- One collision on East Covell Boulevard east of Monarch Lane involved a bus hitting a fixed object, resulting in several injuries.
- None of the eight total collisions resulted in fatalities, and none involved a pedestrian.

4.13.3 REGULATORY CONTEXT

The following is a description of the regulatory context under which transportation issues are managed at the State and local levels.

State Regulations

The following are the State environmental laws and policies relevant to transportation.

Assembly Bill 32

Assembly Bill (AB) 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that "(a) the statewide GHG emissions limit shall remain in effect unless otherwise amended or repealed; (b) it is the intent of the Legislature that the statewide GHG emissions limit continues in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020; and (c) the CARB shall make recommendations to the Governor and the Legislature on how to continue reductions of GHG emissions beyond 2020."

While AB 32 does not contain specific expectations related to individual land use projects, it does set statewide expectations for GHG reduction that have influenced VMT reduction expectations from land development projects as part of SB 375 and SB 743.

Senate Bill 375

SB 375 requires metropolitan planning organizations (MPO) to prepare a sustainable communities strategy (SCS) as part of their regional transportation plans (RTP). The SCS demonstrates how the region could meet its GHG reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify land use and transportation strategies that combined with the RTP project list will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board (CARB).

Senate Bill 743

SB 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under the CEQA. First, SB 743 directs the Governor's Office of Planning and Research (OPR), which has since been renamed to the Governor's Office of Land Use and Climate Innovation (LCI), to amend the CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPA) and allows LCI to extend use of the new metrics beyond TPAs. In the amended CEQA Guidelines, LCI selected automobile VMT as the preferred transportation impact metric and applied their discretion to recommend its use statewide. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. The amended CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts" and the provisions requiring the use of VMT apply statewide as of July 1, 2020. The amended CEQA Guidelines further state that land use "projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact."

SB 743 establishes that aesthetic and parking impacts of residential, mixed-use residential, or employment center projects on an infill site within a TPA are not considered significant impacts on the environment. SB 743 added Section 21099 to the California Public Resources Code (PRC), which states that automobile delay, as described by LOS or similar measures of vehicular capacity or traffic congestion, is not considered a significant impact on the environment upon certification of the CEQA Guidelines by the California Natural Resources Agency. Following certification of

the amended CEQA Guidelines in December 2018, LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment.

Finally, SB 743 establishes a CEQA exemption for residential, mixed-use, and employment center projects a) within transit priority areas, b) consistent with a specific plan for which an EIR has been certified, and c) consistent with a SCS. The exemption requires further review if the project or circumstances changes significantly.

Technical Advisory on Evaluating Transportation Impacts in CEQA

In December of 2018, the OPR (now LCI) published the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory), which is a guidance document to provide advice and recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. The Technical Advisory is intended to be a resource for the public to use at their discretion, and the LCI does not enforce any part of the recommendations contained therein. The Technical Advisory includes recommendations regarding methodology, screening thresholds, and recommended thresholds per land use type. Lead agencies may consider and use these recommendations at their discretion.

The Technical Advisory identifies screening thresholds to quickly identify when a project is expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT:

- Small projects – Projects consistent with an SCS and local general plan that generate or attract fewer than 110 trips per day;
- Projects near major transit stops – Certain projects (residential, retail, office, or a mix of these uses) proposed within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor;
- Affordable residential development – A project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT;
- Local-serving retail – Local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant impact); and
- Projects in low-VMT areas – Residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below:

- Residential development that would generate vehicle travel exceeding 15 percent below existing residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita;
- Office projects that would generate vehicle travel exceeding 15 percent below existing regional VMT per employee may indicate a significant transportation impact; and

- Retail projects that result in a net increase in total VMT may indicate a significant transportation impact.

For mixed-use projects, the Technical Advisory suggests either evaluating each component independently and applying the significance threshold for each project type included (e.g., residential and retail), or evaluating VMT associated only with the project's dominant use.

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."

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS), including in Yolo County. As part of these responsibilities, Caltrans reviews local development projects subject to CEQA to assess potential impacts on the SHS based on the following technical guidance.

Vehicle Miles Traveled-Focused Transportation Impact Study Guide

The VMT Focused Transportation Impact Study Guide (TISG) outlines how Caltrans will review land use projects with a focus on supporting State land use goals, State planning priorities, and GHG emissions reduction goals. The VMT TISG endorses OPR's (now LCI) Technical Advisory as the basis for transportation impact analysis methodology and thresholds, including the use of screening to streamline qualified projects because they help achieve the State's VMT reduction and mode shift goals.

Caltrans Safety Impact Guidance

The Caltrans Safety Impact Guidance provides technical instructions on how to evaluate potential safety impacts on the SHS. The guidance largely focuses on the actions of Caltrans district staff in performing the analysis and providing relevant impact information to lead agencies. The interim guidance recommends that safety analyses include a review of three primary elements related to transportation safety: design standard compliance, collision history, and collision risk (consistent with the Federal Highway Administration's Systemic Approach to Safety). The interim guidance does not establish specific analysis methods or significance thresholds for determining safety impacts under CEQA. Additionally, Caltrans notes that local agencies may use the interim guidance at their own discretion as a guide for review of local facilities.

Local Regulations and Policies

The following are applicable local regulations and policies relevant to transportation.

Sacramento Area Council of Governments

SACOG is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG is responsible for the preparation of, and updates to, the Metropolitan Transportation Plan (MTP)/SCS for the region. The MTP/SCS provides a 20-year transportation vision and corresponding list of projects. The 2020 MTP/SCS was adopted by the SACOG board in November 18, 2019.

The SACOG 2020 MTP/SCS provides the basis for air quality conformity findings related to the federal Clean Air Act and determinations of whether the region is complying with GHG reduction targets for automobiles and light trucks established under SB 375. Major projects that are inconsistent with the plan could jeopardize the plan's effectiveness for air pollution and GHG reduction. Consequently, consistency with the MTP/SCS is a potential basis for determining adverse impacts related to these environmental topics.

City of Davis General Plan

The City of Davis General Plan Transportation Element was updated in 2013. The following goals, performance objectives, policies, and actions related to transportation and circulation are applicable to the project:

Transportation Chapter

Goal #1 Davis will provide a comprehensive, integrated, connected transportation system that provides choices between different modes of transportation.

Performance Objective #1.1 Achieve at least the following mode share distribution for all trips by 2035:

- 10 percent of trips by walking;
- 10 percent of trips by public transportation; and
- 30 percent of trips by bicycle.

Performance Objective #1.2 Increase use of walking, bicycling, and public transportation to and from the following places:

- Work;
- Schools (elementary, junior high, and senior high);
- UC Davis; and
- Downtown.

Goal #2 The Davis transportation system will evolve to improve air quality, reduce carbon emissions, and improve public health by encouraging usage of clean, energy-efficient, active (i.e. human powered), and economically sustainable means of travel.

Policy TRANS 1.6 Reduce carbon emissions from the transportation system in Davis by encouraging the use of non-motorized and low carbon transportation modes.

Policy TRANS 2.1 Provide Complete Streets to meet the needs of drivers, public transportation vehicles and riders, bicyclists, and pedestrians of all ages and abilities in all transportation planning, programming, design, construction, reconstruction, retrofit, operations, and maintenance activities and products. The City shall view all transportation improvements as

	opportunities to improve safety, access, and mobility for all travelers in Davis, and recognizes bicycle, pedestrian, fixed-route transit, and demand-response para-transit modes as integral elements of the transportation system along with motor vehicles.
Policy TRANS 2.2	Implement state-of-the-art street design solutions to improve bicycle/pedestrian access, comfort, and safety that may include: • Bicycle boxes at intersections; • Cycletracks; • Shared lane markings (sharrows); • Contraflow bicycle lanes; • Improved bicycle detection at intersections; • Two-stage turn queue boxes; • Colored bicycle lanes; and • Bicycle route wayfinding.
Policy TRANS 2.3	Apply best practices in sustainability to new streets and redesigns of existing streets/corridors.
Policy TRANS 2.4	As part of the initial project review for any new project, a project-specific traffic study may be required. Studies shall identify impacted transportation modes and recommend mitigation measures designed to reduce these impacts to acceptable levels.
Policy TRANS 2.5	Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.
Policy TRANS 2.6	Maintain existing bicycle facilities in good repair.
Policy TRANS 2.7	Minimize impacts of vehicle traffic on local streets to maintain or enhance livability of the neighborhoods. Consider traffic calming measures along collector and minor arterial streets, where appropriate and feasible, to slow speeds.
Policy TRANS 2.8	Improve the function, safety, and appearance of selected corridors as illustrated.
Policy TRANS 2.10	Prohibit through truck traffic on streets other than identified truck routes shown in the Transportation Element.

	Policy TRANS 3.1	Facilitate the provision of convenient, reliable, safe, and attractive fixed route, commuter, and demand responsive public transportation that meets the needs of the Davis community, including exploring innovative methods to meet specialized transportation needs.
	Policy TRANS 3.3	Require new development to be designed to maximize transit potential.
Goal #4	Davis will strengthen its status as a premier bicycling community in the nation by continuing to encourage bicycling as a healthy, affordable, efficient, and low-impact mode of transportation accessible to riders of all abilities, and by continuously improving the bicycling infrastructure.	
	Policy TRANS 4.2	Develop a continuous trails and bikeway network for both recreation and transportation that serves the Core, neighborhoods, neighborhood shopping centers, employment centers, schools and other institutions; minimize conflicts between pedestrians, bicyclists, equestrians, and automobiles; and minimize impacts on wildlife. Greenbelts and separated bike paths on arterials should serve as the backbone of much of this network.
	Policy TRANS 4.5	Establish and implement bicycle parking standards for new developments and significant redevelopment.
	Policy TRANS 4.7	Develop a system of trails around the edge of the City and within the City for recreational use and to allow pedestrians and bicyclists to reach open space and natural areas.
	Policy TRANS 4.10	Maintain existing bicycle paths in good repair.
	Policy TRANS 5.1	Use parking management techniques to efficiently manage motor vehicle parking supply and promote sustainability.
	Policy TRANS 5.2	Existing and future off-street parking lots in development should contribute to the quality of the urban environment and support the goals of this chapter to the greatest extent possible.

Beyond Platinum Bicycle Action Plan

The City of Davis Beyond Platinum Bicycle Action Plan (Bicycle Action Plan), adopted in 2014, includes discussions regarding goals and objectives, bicycle facility guidelines, engineering

standards, and implementation and funding.[4] Appendix C of the Bicycle Action Plan includes a variety of proposed bicycle facilities throughout the City, although bicycle facility enhancements are not located within the vicinity of the project site.

4.13.4 IMPACTS AND MITIGATION MEASURES

This section describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential impacts related to transportation and circulation.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed project would be considered to result in a significant adverse impact on the environment in relation to transportation and circulation if they would result in any of the following:

- Conflict with a program, plan, ordinance, or policy, addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards to vehicle safety due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Result in inadequate emergency access.

VMT Standards of Significance

As of April 2025, the City of Davis has not adopted VMT procedures standards. Therefore, the VMT analysis within this chapter relies on guidance from the OPR (now LCI) Technical Advisory. Pursuant to the Technical Advisory, the proposed project would result in a significant VMT impact if it would cause the following:

- The residential component would generate residential VMT per capita exceeding 15 percent below baseline local or regional residential VMT per capita for residential uses.

The proposed project's residential uses represent the dominant uses and would be responsible for the vast majority of external vehicle trips (over 90 percent of daily trips) and VMT that would be generated by the proposed project. Therefore, consistent with the Technical Advisory, Fehr & Peers determined that it is appropriate to evaluate project VMT impacts associated with the proposed residential component only. As discussed above, according to the TIS, the existing residential VMT per capita for the City of Davis and the SACOG region is 30.1 and 21.7 VMT per capita, respectively. Therefore, the proposed project would result in a significant impact if it would generate residential VMT per capita exceeding 15 percent below either the baseline City average or regional average VMT per capita for residential uses (i.e., 25.6 and 18.4 VMT per capita, respectively).

Method of Analysis

The VMT impact analysis relies on guidance provided in the OPR (now LCI) Technical Advisory, as well as a quantitative analysis. The analysis methodology provided in the TIS prepared for the proposed project by Fehr & Peers is discussed below.

[4] City of Davis. *Beyond Platinum Bicycle Action Plan*. February 2014.

Project Trip Generation

The TIS used the mixed-use trip generation tool (MXD+) to estimate vehicle trip generation, including internal trip capture that would result from complementary land uses within the project site. Prior to 2007, conventional methods available to transportation engineers systematically overestimated the trips generated by and impacts of mixed-use development because they did not accurately reflect the amount of internal trip linking or the level of external trips made by transit, biking, and/or walking. This resulted in increased development costs due to oversized infrastructure, skewed public perception, and resistance to approving smart growth. While the Institute of Transportation Engineers (ITE) Trip Generation Handbook does include a methodology for estimating internal trips, it only applies to AM and PM peak hour conditions and has been shown to be less accurate than more academically oriented efforts.

In the early 2000's, two significant research studies provided the opportunity to improve the state of practice. One study sponsored by the U.S. Environmental Protection Agency (USEPA) and another by the Transportation Research Board (NCHRP 684) have developed means to improve trip generation estimation for mixed-use development. The two studies examined over 240 mixed-use development sites throughout the U.S. and, using different approaches, developed new quantification methods. Fehr & Peers has reviewed the two methods, including the basis, capabilities, and appropriate uses of each, to produce a new method, MXD+, that combines the strengths of the two individual tools to establish a new best practice. MXD+ recognizes that traffic generation by mixed-use and other forms of sustainable development relate closely to the density, diversity, design, destination accessibility, transit proximity, and scale of development.

The MXD+ method explains 97 percent of the variation in trip generation among mixed-use developments, compared to 65 percent for the methods previously recommended by ITE. While remaining slightly (two to four percent) conservative to avoid systematically understating impacts, it substantially reduces the 35 to 37 percent average overestimate of traffic generation produced by conventional ITE methods.

MXD+ improves the accuracy of impact estimation and gives planners a tool to rationally balance land use mix and to incorporate urban design, context compatibility, and transit orientation to create lower impact development. Inputs for the MXD+ tool include the types and quantities of project land uses, in accordance with land use categories included in the ITE Trip Generation Manual, 11th Edition.

Using the methods described above, Table 4.13-2 summarizes the estimated weekday and peak hour trip generation for the proposed project. As shown therein, the proposed project would generate an estimated 10,422 net new daily trips, 774 net new AM peak hour trips, and 1,045 net new PM peak hour trips during a typical weekday.

The proposed crosswalks across East Covell Boulevard at Alhambra Drive would provide the project's elementary and junior high school age residents a direct route to walk or bike to Harper Junior High and Korematsu Elementary School (as opposed to traveling out of direction to use the underpass located west of the project site). However, at the time the project's trip generation was estimated as part of the TIS, the inclusion of the crosswalks was not known. Therefore, the majority of nearby school trips were assumed to be made by way of private vehicle.

As such, the project's external vehicle trip generation during the AM peak hour is a conservative estimate and actual external vehicle trip generation would likely be less than the current estimate.

Table 4.13-2
Proposed Project Vehicle Trip Generation

Land Use	ITE Code	Units	Quantity	Daily Trips[1]	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Net New Uses										
Single-Family Detached	210	Dwelling Units	712	6,714	129	369	498	421	248	669
Multi-Family Housing Low Rise	220	Dwelling Units	288	1,941	28	87	115	93	54	147
Affordable Housing	223	Dwelling Units	250	1,203	36	89	125	68	47	115
Recreational Community Center	495	1,000 sf	9.5	274	12	6	18	11	13	24
Soccer Complex	488	Fields	3	215	2	2	4	33	15	48
Tennis Courts	490	Courts	6	182	3	3	6	18	7	25
Strip Retail Plaza	822	1,000 sf	5	272	7	5	12	17	17	33
Daycare Center	565	1,000 sf	6.3	300	37	32	69	33	37	70
Raw External Vehicle Trips				*11,101*	*254*	*593*	*847*	*694*	*438*	*1,131*
Reductions										
Internal Capture[2]				-568	-14	-34	-48	-36	-24	-60
External Walk, Bike, and Transit[3]				-111	-4	-21	-25	-21	-5	-26
Total Reductions				*-679*	*-18*	*-55*	*-73*	*-57*	*-29*	*-86*
Net New External Vehicle Trips				**10,422**	**236**	**538**	**774**	**637**	**409**	**1,045**

1 Trips generated based on trip rates from 11th Edition of *Trip Generation Manual* (Institute of Transportation Engineers, 2021).
2 Internal capture reductions based on application of MXD+ model: Daily = 5.1%, AM Peak Hour = 5.9%, PM Peak Hour = 5.3%.
3 External walk, bike, and transit trip reductions based on MXD+ model for daily trips and US Census Bureau ACS journey to work data.

Values may be sum perfectly due to rounding.
KSF = thousand square feet. GLA = Gross Leasable Area.

Source: Fehr & Peers, 2025.

With respect to the PM peak hour, students are released before the East Covell Boulevard/Alhambra Drive intersection's peak hour of travel (4:30 to 5:30 PM) and the number of vehicle trips would not be affected.

Trips generated by the proposed Community Park are reflected by the individual community center, softball/multi-use fields, and pickleball courts land uses. Such uses are expected to be used primarily by the project's or nearby residents. Although the uses could attract trips from throughout the City of Davis and other nearby cities such as Woodland (e.g., softball or pickleball tournament, or gathering at community center), such activities are typically infrequent and occur during off-peak hours.

The project would construct two new bus stops along its frontage. However, agreements with Unitrans or Yolobus indicating that buses would stop at either location do not exist. If Unitrans' P Route were to stop at one of the new stops along the project frontage, a project resident would not have to walk the one-third mile distance to the nearest Route P stop at Wright Boulevard. The change could make use of the P Route more convenient to access destinations, such as Oak Tree Plaza Shopping Center, Davis Senior High School, and Sutter Davis Hospital. The addition of the stop was not explicitly considered in the trip generation estimates, as agreements have not been reached with transit providers to stop in front of the project.

The project's daily new trips generated can be classified as follows:

- 91 percent, or 9,473 new daily trips, are associated with the residential land uses.
- Nine percent, or 949 new daily trips, are associated with the non-residential land uses.

LCI Screening Methods

As described in the Regulatory Context section above, the Technical Advisory suggests that small projects, projects near major transit stops, affordable residential development, local-serving retail, and projects in low-VMT areas should have a less-than-significant impact on VMT. The project would not screen out as a small project, an affordable residential development (given that only 20 percent of the units would be affordable) or as local-serving retail.

With respect to major transit stops, the only definition is codified in the updated CEQA Guidelines. A major transit stop is defined as "the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Although four bus routes stop within 0.5-mile of the project site, none operate with 15-minute headways. Therefore, the proposed project does not qualify as being near a major transit stop.

As previously discussed, residential VMT per capita generated by existing residential uses within the project vicinity is slightly above the existing City average and substantially above the existing SACOG average. Therefore, the project would also not screen out as being in a low-VMT area.

Based on the above, the TIS concluded that, because the proposed project does not qualify for any of the screening criteria, a quantitative VMT analysis is necessary.

Quantitative Analysis

As previously discussed, the VMT forecasts were derived from forecasts prepared using the regional travel demand model developed by SACOG. SACSIM is an activity-based model that

estimates the interrelated travel behavior of a synthetic population of individuals for every individual household. SACSIM19 is the current version of the regional model that was used for the VMT forecasts. The SACSIM19 model is a sophisticated activity-based model that predicts the travel demand and travel patterns for residents, workers, students, visitors, and commercial vehicles throughout the SACOG region. The modeling process creates synthetic or artificial population data by expanding on a representative sample of persons with attributes such as gender, age, ethnicity, etc. SACSIM predicts how people in the six-county region travel on a typical weekday, including where they go, when they make trips, why they make trips, what modes they use, and more.

The six-county SACSIM model area is disaggregated into zones that are geocoded and include the land use details for the defined area of each zone. The model also has a geocoded transportation network. Centroids are the center of the zones, and each zone has one or more "centroid connectors" that load trips generated by the zone's land uses onto the model's transportation network.

For the purposes of this analysis, the base year SACSIM19 model was refined to include Traffic Analysis Zone (TAZ) splits, land use inputs, and centroid connectors that align with the various land use components and access locations of the project. The proposed land uses were incorporated by updating the parcel, household, and synthetic population inputs in the model.

For the residential component VMT analysis, the SACSIM19 model was used to estimate residential VMT per capita that would be generated by the residential component of the proposed project. Residential VMT includes all automobile (i.e., passenger cars and light-duty trucks) vehicle trips, which are traced back to the residence of the trip-maker. Residential VMT includes all vehicle "tours" (both work/commute vehicle tours and non-work vehicle tours) that are associated with the residential units (including non-home-based travel). VMT for each home is then summed by TAZ and divided by the total population in that TAZ to arrive at residential VMT per capita. Project-generated residential VMT per capita was estimated using the latest SACOG-recommended methodology, which accounts for the full amount of VMT generated by trips with a trip end located outside of the SACOG region (e.g., Dixon or Vacaville).

A select zone analysis was performed for the TAZ containing the project site to determine the number of project-generated residential vehicle trips estimated by the SACSIM19 model. However, SACSIM is not sensitive to many project-specific elements or programs intended to reduce travel. The following transportation demand management (TDM) strategies described in the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Assessing GHG Emission Reductions, Climate Vulnerabilities, and Health and Equity* (December 2021) are included as part of the proposed project. Because the SACSIM model is generally sensitive to strategies T-1 (Increasing Residential Density) and T-4 (Integrating Affordable Housing), the foregoing strategies were not manually included in the model. The TDM strategies and associated percentage reduction in VMT accounted for in the TIS are as follows:

- **T-17: Improve Street Connectivity**. Based on CAPCOA guidance, the relative type and mix of on-site land uses, and National Highway Transportation Survey (NHTS) trip length distribution data, a maximum of three percent reduction in VMT can reasonably be assumed for the project based on its street connectivity.
- **T-18: Provide Pedestrian Improvement**. Measure T-18 considers how increased sidewalk coverage improves pedestrian access, encouraging people to walk instead of

drive. The proposed project would increase the total sidewalk or shared-use space in the area from 1.5 miles of sidewalk to two miles. Based on the methodologies suggested by CAPCOA, a 1.7 percent reduction in VMT would be expected.

- **T-19-A: Construct or Improve Bike Facility**. Providing bicycle infrastructure helps to improve biking conditions and encourages a mode shift from vehicles to bicycles, displacing VMT. Strategy T-19-A has an ultimate effectiveness of a 0.8 percent reduction in VMT based on a variety of factors, the most significant being the proportion of overall plan or community VMT that is on the roadway parallel to the bike facility being added. The proposed project would include a new Class I shared-use path along the project's frontage and new crosswalks at the Alhambra Drive intersection. According to the 0.23 students per unit student generation estimates from the Davis Joint Unified School District (DJUSD), the TIS concluded that the project could yield approximately 288 students in grades kindergarten through 12th grade. The nearby Korematsu Elementary or Harper Junior High schools serve 11 of the 13 grades between kindergarten and 12th grade; therefore, approximately 250 project students may attend the two schools.

  According to the TIS, each one-way trip would be about 4,300 feet (from the project mid-point to each school). On a daily basis, each student walk/bike tour would be replacing four 4,300-foot vehicle trips per day (i.e., morning outbound and return trip, and afternoon outbound and return trip), which equates to about 3.25 VMT per student eliminated. Total VMT per dwelling unit is therefore estimated at about 87 miles of travel per day (SACOG output of 34 miles of travel per capita x 2.57 persons per household). If two-thirds of the 250 students attending the two schools choose to walk or bike, the total VMT savings would be 545 VMT, or a total reduction of 0.5 percent residential VMT.

  Based on student generation rates and the extension of the Class I shared use path, which would likely also encourage other project trips to be non-auto, the maximum 0.8 percent reduction recommended by CAPCOA was applied.

Strategies T-20 (Expand Bikeway Network) and T-56 (Active Modes of Transportation for Youth) were not considered as part of the TIS, as the strategies duplicate the effects of Strategy T-19A. Strategy T-25 (Extend Transit Network Coverage or Hours) was not considered as part of the TIS because, although the project would construct new bus stops along East Covell Boulevard, an agreement with transit service providers to have buses stop at these locations is not currently in place and cannot be legally required. When the above three strategy reductions are summed, the net result is a five percent reduction in VMT, which was applied to the project's residential VMT per capita as a post-model adjustment.

The project-generated residential VMT per capita was then compared to the baseline local and regional residential VMT per capita averages to determine whether the residential component of the proposed project would exceed the applicable VMT threshold of significance (i.e., whether the residential component would generate residential VMT per capita exceeding 15 percent below baseline local or regional residential VMT per capita for residential uses).

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

4.13-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Construction activities associated with the proposed project would include use of construction equipment, including on-site earth-moving vehicles, bulldozers, and other heavy machinery, as well as building materials delivery, and construction worker commutes. The transport of heavy construction equipment to the site, haul truck trips, and construction worker commutes could affect the local roadway network.

Construction workers typically arrive before the morning peak hour and leave before the evening peak hours of the traditional commute time periods. Deliveries of building material (lumber, concrete, asphalt, etc.) would also normally occur outside of the traditional commute time periods. In addition, any truck traffic to the project site would follow designated truck routes, and construction would likely stage any large vehicles (i.e., earth-moving equipment, cranes, etc.) on the site prior to beginning site work and remove such vehicles at project completion. However, detailed information related to the construction routes and equipment staging, or a construction management plan, is not available. As a result, construction activities could include disruptions to the transportation network near the site. In addition, the proposed project includes construction of one left-turn and one right-turn lane at the East Covell Boulevard/Alhambra Drive/westerly site access intersection, and a second East Covell Boulevard westbound lane along the project frontage. Such improvements to East Covell Boulevard could temporarily disrupt traffic flow during construction.

Based on the above, without proper planning of construction activities, construction traffic and potential street closures could interfere with existing roadway operations, including pedestrian, bicycle, and transit facilities, during the construction phase. Therefore, the proposed project has the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.13-1 *Prior to any construction activities for the project site, the project applicant shall prepare a detailed Construction Traffic Control Plan (CTCP) and submit it for review and approval by the City Department of Public Works Engineering and Transportation. The applicant and the City shall consult with Yolo County, Caltrans, Unitrans, Yolobus, and local emergency service providers for their input prior to approving the CTCP. The CTCP shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction. A copy of the CTCP shall be submitted to local emergency response agencies and the agencies shall be notified at least 14 days prior to the commencement of construction that would partially or fully obstruct roadways. At a minimum, the CTCP shall include:*

- *The number of truck trips, time, and day of street closures;*
- *Time of day of arrival and departure of trucks;*
- *Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting;*
- *Provision of a truck circulation pattern that minimizes effects on existing vehicle traffic during peak travel periods and maintains safe bicycle circulation;*
- *Resurface and/or repair any damage to roadways that occurs as a result of construction traffic;*
- *Provision of driveway access plans so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pickup and drop-off areas);*
- *Maintain safe and efficient access routes for emergency vehicles;*
- *Manual traffic control when necessary;*
- *Proper advance warning and posted signage concerning street closures; and*
- *Provisions for pedestrian safety.*

4.13-2 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

As discussed throughout this chapter, LOS is no longer the applicable metric when evaluating transportation impacts of a project. The evaluation of VMT is discussed in Impact 4.13-4 of this chapter. Therefore, the following discussion focuses on whether the proposed project would result in impacts to existing or planned pedestrian and bicycle facilities and services within the project area.

The proposed project would not include any modifications to the existing pedestrian and bicycle facilities described in the Existing Setting section of this chapter; thus, the proposed project would not physically disrupt existing pedestrian or bicycle facilities. As shown in Figure 3-11, Pedestrian Circulation, in Chapter 3, Project Description, of this EIR, the proposed project would construct new pedestrian and bicycle facilities and expand the local network as follows:

- Extension of Class I shared-use path along the entirety of the project frontage on the north side of East Covell Boulevard, which would connect to the existing path to the west and the underpass of East Covell Boulevard at the project's westerly boundary.
- Multiple shared-use path extensions into the project site from the proposed east-west shared-use path along East Covell Boulevard.
- Four pedestrian connections to the existing trail within the adjacent Wildhorse Agricultural Buffer.

- The following modifications to the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection would be made to enhance bicycling and walking in the area:
    - The pair of triangular medians in the southwest and southeast corners of the intersection, which currently allow free-flow, yield-controlled vehicle movements, would be replaced with signal-controlled right-turn lanes. Additionally, the curb returns in the corners would be reconstructed with smaller radiuses, removing excess pavement and reducing turning speeds.
    - Crosswalks would be added to the west, east, and north legs, and maintain crosswalk on south leg.
    - Bicycle detection and signal phasing/timing would be provided for northbound and southbound movements.
    - Right turns on red would be restricted to reduce conflicts between vehicles and bicyclists and pedestrians.

School-age children living in the proposed residences would have multiple options for accessing nearby Harper Junior High or Korematsu Elementary School on foot or by bike. To cross East Covell Boulevard, students could either use the underpass or the signalized crosswalks at Alhambra Drive, which would have bicycle-only signal phases.

According to the TIS, the City of Davis Beyond Platinum Bicycle Action Plan does not show any planned bicycle facilities along the project frontage or near the project. The closest improvements include a buffered bike lane on Loyola Drive between Pole Line Road and Tulip Lane, and a shared lane on Birch Lane between East Covell Boulevard and Pole Line Road. The project would not preclude such facilities, or any additional crossing improvements near Harper Junior High, from being constructed in the future. Therefore, the proposed project would not interfere with any planned future pedestrian or bicycle facilities.

However, as part of Mitigation Measure 4.13-3(b), the project will be required to construct westbound right-turn lanes at the site's two access points on East Covell Boulevard. Because a Class II bike lane is currently located on westbound East Covell Boulevard, construction of the turn lanes would increase conflicts between bicyclists and vehicles. Thus, Mitigation Measure 4.13-3(b) would cause the proposed project to conflict with a program, plan, ordinance, or policy addressing pedestrian facilities or bicycle facilities, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.13-2 *Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall install the following improvements at the project site's two access points along East Covell Boulevard: a green skip-striping bike lane marking at the transition taper (i.e., mixing zone) at the start of each turn pocket; a continuous green bike lane; and a skip-striped bike lane marking through each*

intersection. The required improvements shall be subject to review and approval by the City Engineer.

The design shall be similar to the existing bike lane constructed on eastbound East Covell Boulevard at the signalized access at Harper Junior High, which was installed in 2020/2021. The high-visibility improvements shall alert motorists to the potential for a bicyclist to be present and enhance the profile of bicyclists.

Implementation of the foregoing improvements, or a set of improvements of equal effectiveness as determined by the City Engineer, would reduce the potential for conflicts involving bicyclists or pedestrians that would otherwise be caused by the proposed project.

4.13-3 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services. Based on the analysis below and with implementation of mitigation, the impact is *less-than-significant*.

As discussed in the Existing Setting section of this chapter, the project site would be served by existing bus stops located on East Covell Boulevard associated with Unitrans Routes L, P, and Q, as well as Yolobus Route 43. According to the TIS prepared for the proposed project, the project would not conflict with any of the existing transit stops along East Covell Boulevard. The City of Davis is in the midst of updating its Short Range Transit Plan, with an updated plan anticipated to be adopted in the summer of 2026. The project would not cause conflicts with any known future planned transit facilities or services.

With respect to impacts to performance or safety, the proposed project would include the construction of two new bus stops on East Covell Boulevard: one adjacent to the neighborhood retail area and one adjacent to the high-density residential area. By constructing two bus stops along the project frontage, the project site would have improved access to Unitrans or Yolobus routes. The proposed project does not include any improvements that would have the potential to physically disrupt existing transit facilities or interfere with the implementation of planned future transit facilities.

According to the TIS, the transit system performance is already strained by peak period congestion on roadways such as East Covell Boulevard and Mace Boulevard. On-time performance is defined by Unitrans as a bus arriving at the terminal before the scheduled time or within five minutes of the scheduled time. Arriving more than five minutes late is defined as “late.” Unitrans has a systemwide on-time performance target of 90 percent. The Unitrans General Manager’s April 2024 Report notes that the P and Q lines, both of which would serve the project site, experience the lowest on-time performance systemwide at 68 and 57 percent of the time, respectively.

According to the TIS, the proposed project would cause a substantial increase in vehicle travel demand and cause increases to peak evening hour delay on East Covell Boulevard during the evening commute period. Specifically, the single westbound

travel lane at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection would experience an average delay increase from less than 10 seconds per vehicle to over four minutes per vehicle. In other words, without other improvements, a driver on westbound East Covell Boulevard would experience a four-minute increase in travel time while passing through the congested West Covell Boulevard/Alhambra Drive intersection south of the project site. Such a delay increase would be experienced by private vehicles and public buses alike. Therefore, the performance of Unitrans and Yolobus routes could suffer, with on-time arrivals becoming more challenging to complete, and the proposed project would exacerbate currently deficient Unitrans performance with respect to on-time performance targets.

Based on the above, the proposed project could conflict with a program, plan, ordinance, or policy addressing transit facilities and services, and a ***significant*** impact could occur.

Mitigation Measure(s)

The dedicated right-turn lanes would reduce PM peak hour delays to westbound through traffic (including buses) at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection from a delay over four minutes per vehicle to 40 seconds. Roadway improvements would be required to help Unitrans Route P, which operates in the westbound direction of East Covell Boulevard. The net increase in travel time at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection between existing conditions and existing plus project (40 seconds) is negligible compared to the total 50-minute length of Route P and typical daily/hourly fluctuations in travel. Thus, the right-turn lane improvements would effectively offset any worsening of on-time transit performance and implementation of Mitigation Measure 4.13-3 would reduce the above potential impact to a *less-than-significant* level.

4.13-3 *Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall construct dedicated right-turn lanes on westbound East Covell Boulevard at the two project accesses to reduce right-turning traffic currently accommodated by a single travel lane.*

4.13-4 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Based on the analysis below, even with mitigation, the impact is *significant and unavoidable*.

The non-residential land uses (i.e., neighborhood retail, daycare center, pickleball courts, community center, and playing fields) are primarily intended to support the project and nearby residents. According to Table 4.13-2, the non-residential uses would generate 1,243 daily trips, with an estimated 23 percent of the trips being internalized. Many of the trips attracted to the project's non-residential uses from external locations would be short-distance trips and may be replacement travel. Northeast Davis currently has a limited selection of small retail and coffee shops to serve its residents. While tennis courts do exist at Slide Hill Park and Covell Park to allow for pickleball, a designated group of pickleball courts for residents to gather and compete does not exist. Thus, the project's non-residential land uses were considered local-serving by the TIS.

The TIS prepared for the proposed project compared the project's VMT per capita against city-wide and regional averages consistent with the significance criteria used for VMT impact analysis. However, the TIS also examined how the proposed project would affect total VMT generated in the region. Because the proposed project would construct new residences in the City of Davis, some long-distance trips made to the UC Davis campus and to employers in the City would be replaced with much shorter trips. As such, the TIS calculated the total VMT on all roadways in the SACSIM travel demand model for the existing conditions. The existing VMT total was 63,101,746 miles of travel on a weekday. When the proposed project was added, total miles of travel was 62,997,446 (a 104,300 mile decrease).

Nonetheless, while a regional decrease in VMT would occur, total VMT within the City would increase. Therefore, the significance criteria of evaluating the project's VMT per capita against citywide and regional averages is appropriate.

According to the TIS, the proposed project would generate an average of 32.5 residential VMT per capita. Table 4.13-3 compares project-generated, baseline local (City of Davis), and baseline regional (SACOG region) residential VMT per capita. As shown in Table 4.13-3, residential VMT per capita generated by the residential component of the proposed project would be eight percent and 50 percent above baseline local and regional residential VMT per capita averages, respectively. As such, the proposed residential component would generate residential VMT per capita exceeding 15 percent below baseline local and regional residential VMT per capita averages.

Based on the above, the proposed project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and a ***significant*** impact could occur.

Table 4.13-3
Project Weekday Residential VMT per Capita

Scenario	Residential VMT per Capita	Proposed Project Compared to Baseline Average
Proposed Project Residential Component	32.5[1]	--
Baseline City of Davis Average	30.1	+8.0%
Baseline SACOG Region Average	21.7	+50.0%

[1] Output from the SACSIM19 travel demand model indicated 34.2 VMT per capita. The value shown here represents a five percent reduction in VMT due to the three project attributes described in the Methods of Analysis subsection herein.

Source: Fehr & Peers, 2025.

Mitigation Measure(s)

In order to generate VMT at a level equal to or below the significance threshold (for the city-wide average comparison), a 21.2 percent reduction in VMT per capita would need to be achieved through implementation of TDM strategies. An even greater 43.4 percent reduction would be needed for the project's VMT per capita to be below the regional significance threshold (i.e., less than 18.4 VMT per capita).

Implementation of TDM strategies can result in reductions to a project's vehicle trip generation based on certain types of project site modifications, programming, and operational changes. The CAPCOA *Handbook for Assessing GHG Emission Reductions, Climate Vulnerabilities, and Health and Equity* (December 2021) identifies numerous TDM strategies and quantifies their potential vehicle trip reduction effects. While each strategy provides standalone VMT reduction potential, multiplicative dampening limits the VMT reduction potential in instances where multiple strategies are implemented together.

The TIS identifies the following potential TDM strategies, including the associated VMT reduction potential, which represents raw VMT reduction percentages without adjustments for multiplicative dampening and/or category maximums:

1. **Implement Conventional Carshare Program (CAPCOA Handbook Strategy T-21-A)**: This measure would increase carshare access in the community by deploying conventional carshare vehicles. Carsharing offers convenient access to a vehicle for personal or commuting purposes, which helps encourage transportation alternatives and reduces vehicle ownership, thereby avoiding VMT and the associated GHG emissions.

   According to CAPCOA, the maximum VMT reduction from this strategy would be 0.15 percent. Quantifying the efficacy of this strategy would be dependent on the number of carshare vehicles deployed in the project area.

2. **Implement Electric Carshare Program (CAPCOA Handbook Strategy T-21-B)**: This measure would increase electric carshare access in the community by deploying electric carshare vehicles.

   According to CAPCOA, the maximum VMT reduction from this strategy would be 0.18 percent. Quantifying the efficacy of this strategy would be dependent on the number of carshare vehicles deployed in the project area.

3. **Implement Pedal (Non-Electric) Bikeshare Program (CAPCOA Handbook Strategy T-22-A)**: This measure would establish a bikeshare program to provide users with on-demand access to bikes for short-term rentals. Bikeshare programs can incentivize increased bicycle use and decrease vehicle use.

   According to CAPCOA, the maximum VMT reduction from this strategy would be 0.02 percent. Quantifying the efficacy of this strategy would be dependent on the number of non-electric bikes deployed in the project area.

4. **Implement Electric Bikeshare Program (CAPCOA Handbook Strategy T-22-B)**: This measure would establish an electric bikeshare program to provide users with on-demand access to electric bikes for short-term rentals. Bikeshare programs can incentivize increased bicycle use and decrease vehicle use.

   According to CAPCOA, the maximum VMT reduction from this strategy would be 0.06 percent. Quantifying the efficacy of this strategy would be dependent on the number of electric bikes deployed in the project area.

5. **Implement Scootershare Program (CAPCOA Handbook Strategy T-22-C)**: This measure would establish a scootershare program to provide users with on-demand access to scooters for short-term rentals. Scootersehare programs can incentivize increased bicycle use and decrease vehicle use.

   According to CAPCOA, the maximum VMT reduction from this strategy would be 0.07 percent. Quantifying the efficacy of this strategy would be dependent on the number of scooters deployed in the project area.

6. **Extend Transit Network Coverage or Hours (CAPCOA Handbook Strategy T-25)**: This measure would expand the local transit network by adding two new bus stops adjacent to the project site. The new stops would likely be used by Unitrans Route P and Yolobus Route 43. The stops could potentially increase transit mode split by providing a more convenient bus passenger loading/unloading area.

   According to CAPCOA, this strategy would have a maximum reduction potential of 4.6 percent, though such a level of reduction would require expanding the transit service area and lengthening hours of operation. Quantifying the efficacy is therefore not possible at this time due to the uncertainty of which bus routes project residents would select and whether a bus stop closer to the site would change travel behavior.

7. **Provide Transit Shelters (CAPCOA Handbook Strategy T-46)**: This measure consists of adding bus shelters and displaying real-time arrival information at the bus stops that the project proposes to construct along East Covell Boulevard. Such amenities would make it safer and more comfortable to wait for the bus, protecting passengers from extreme weather (i.e., high temperatures and heavy precipitation).

   According to CAPCOA, this strategy would have a maximum reduction potential of 0.32 percent of residential VMT. Quantifying the efficacy of this strategy is not possible, as such calculations would require a number of inputs (e.g., increase in number of bus boardings, project transit mode split, percent of total travel time spent waiting, etc.) that are not known at this time.

Incorporating one or more of the foregoing TDM strategies, the proposed project shall be subject to the following mitigation:

4.13-4 *Prior to occupancy of the first residential unit, unless otherwise noted (e.g., Strategy T-21A) the project applicant shall implement TDM strategies to reduce the number of vehicle trips that would be generated by the residential component of the proposed project, subject to review and approval by the City Engineer. The TDM strategies may include, but not necessarily be limited to, CAPCOA Handbook Strategies T-21A, T-21-B, T-22-A through -C, T-25, and T-46.*

Specifically, the project applicant shall implement the foregoing CAPCOA TDM strategies as follows:

- ***Strategy T-21-A**: Upon completion of the Community Park in Phase 2 of the project, the project applicant shall attempt to partner with a carshare service provider and ensure that carshare vehicles are available to project residents in the community park parking lot.*
- ***Strategy T-21-B**: Upon completion of the Community Park in Phase 2 of the project, the project applicant shall attempt to partner with a carshare service provider and ensure that electric carshare vehicles are available to project residents in the community park parking lot.*
- ***Strategy T-22-A**: The project applicant shall attempt to provide space for third party company to manage a bikeshare program and maintain bikes for on-demand access to short-term rentals. Such a program could encourage a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions.*
- ***Strategy T-22-B:** The project applicant shall attempt to provide space for third party company to manage an electric bikeshare program and maintain electric bikes for on-demand access to short-term rentals. Such a program could encourage a mode shift from vehicles to electric bicycles, displacing VMT and thus reducing GHG emissions.*
- ***Strategy T-22-C**: The project applicant shall attempt to provide space for third party company to manage a scootershare program and maintain scooters for on-demand access to short-term rentals. Such a program could encourage a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions.*
- ***Strategy T-25**: The project applicant shall coordinate with Unitrans and Yolobus to request a modification in the service for their Routes P and 43, respectively, to include stops at the project site.*
- ***Strategy T-46**: The project applicant shall include bus shelters and real-time bus arrival boards at the proposed bus stops if Unitrans and Yolobus are using real-time bus arrival boards and have the technology in place to operate and use real-time bus arrival boards. The bus pullout, shelter pad and any underground conduit shall be constructed at the same time as project frontage improvements, although the shelter itself and any electrical connections can be delayed until such time that a transit service provider agrees to provide bus service at the stop.*

Implementation of Mitigation Measure 4.13-4 would reduce residential VMT per capita associated with the residential component of the proposed project by implementing TDM strategies to reduce external vehicle trips generated by project residents.

However, the efficacy of the TDM strategies cannot be quantified at this time and subsequent vehicle trip reduction effects cannot be guaranteed. Existing evidence indicates that the efficacy of TDM strategies with regards to vehicle trip reduction can

vary based on a variety of factors, including the context of the surrounding built environment (i.e., urban versus suburban versus rural) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site specific, but also rely on implementation and/or adoption by private entities (e.g., elective use of carpool program by residents) and other agencies (e.g., transit service operators). Finally, even if implemented, it is uncertain if TDM strategies would be able to sufficiently reduce VMT generated by the project to levels below the thresholds of significance. For example, residential VMT per capita generated by the residential component of the proposed project would need to decrease by 21 percent to fall below the baseline local residential VMT per capita average threshold of significance, and by 43 percent to fall below the regional threshold of significance. Available evidence suggests that conventional TDM strategies are not capable of achieving such trip reduction outcomes in suburban settings such as that of the project site. Due to uncertainties regarding the ability for Mitigation Measure 4.13-4 to reduce the VMT impact to a less-than-significant level, the VMT impact of the proposed project would be considered *significant and unavoidable*.

4.13-5 Result in inadequate emergency access. Based on the analysis below, the impact is *less than significant*.

The proposed project would include two vehicular access points on East Covell Boulevard. The proposed connections would provide multiple opportunities and routes for emergency vehicles to access the project site from different directions.

The closest existing City of Davis fire station to the project site is located approximately 1.17 miles south of the site at 425 Mace Boulevard. The Davis Fire Department (DFD) has identified a need for a new fire station in the northeastern portion of the City. If the station is not accommodated elsewhere, such as within the Village Farms Davis Project site, the proposed project would construct the new station on the reserved land in the southwestern parcel adjacent to East Covell Boulevard (see Figure 3-5, General Plan Amendment, in Chapter 3, Project Description, of this EIR). The fire station would have a dedicated entry and exit onto East Covell Boulevard. The fire station would ultimately be designed and implemented by the DFD. Thus, it is reasonable to conclude that a new fire station would be located either on-site or elsewhere in northeast Davis. Construction of the fire station would reduce emergency response times to the site and surrounding neighborhoods relative to existing conditions.

Medical emergency service access to and from Sutter Davis Hospital, located approximately 3.7 miles west of the project site, would be available from East Covell Boulevard by way of the signalized project access point opposite Alhambra Drive. East Covell Boulevard has traffic signals equipped with emergency vehicle pre-emption, providing signal priority to emergency vehicles in the event of an emergency. In addition, the design of the on-site roadways and intersections will be subject to the City of Davis Public Works Department Standard Specifications, as well as staff review and approval. Overall, by providing multiple access and egress points, the proposed project would meet City of Davis standards for providing emergency vehicle access to the site.

Based on the above, the proposed project would provide adequate emergency access and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.13-6 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Based on the analysis below, the impact is *less than significant*.

The proposed project would include the construction of new on-site roadways and access intersections/driveways, as well as the modification of existing transportation facilities on East Covell Boulevard. All new roadway, bicycle, and pedestrian infrastructure improvements constructed as part of the project would be subject to, and designed in accordance with, applicable City of Davis design and safety standards to avoid creating a geometric design hazard.

The TIS analyzed peak hour traffic operations to determine the extent to which the proposed project could cause off-ramp queues to spill back to the I-80 and SR 113 mainline. To the extent possible, Caltrans strives to prevent off-ramp queues from extending to the freeway mainline to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts).

Table 4.13-4 displays the maximum freeway off-ramp queues at the SR 113/West Covell Boulevard, I-80/Mace Boulevard/Chiles Road, and I-80/CR 32A/CR 32B interchanges under Existing and Existing Plus Project conditions. As shown in the table, all maximum queues would be accommodated within the available off-ramp storage under Existing Plus Project conditions. Therefore, the project would not result in hazards due to a geometric design feature or incompatible uses, and a ***less-than-significant*** impact would occur.

Table 4.13-4
Freeway Off-Ramp Queuing – Existing and Existing Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	Maximum Queue Length[2]			
		Existing Conditions		Existing Plus Project Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
West Covell Boulevard/ SR 113 SB Ramps	1,375 feet	475 feet	250 feet	425 feet	275 feet
West Covell Boulevard/ SR 113 NB Ramps	1,275 feet	300 feet	375 feet	325 feet	525 feet
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	200 feet	175 feet	225 feet	300 feet

(Continued on next page)

Table 4.13-4
Freeway Off-Ramp Queuing – Existing and Existing Plus Project Conditions

Off-Ramp	Off-Ramp Distance[1]	Maximum Queue Length[2]			
		Existing Conditions		Existing Plus Project Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Chiles Road/I-80 EB Off-Ramp	1,100 feet	125 feet	175 feet	175 feet	200 feet
CR 32A/I-80 WB Ramps	1,020 feet	100 feet	100 feet	125 feet	125 feet
Chiles Road/CR 32B/I-80 EB Ramps	875 feet	50 feet	50 feet	50 feet	50 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include any auxiliary lanes on the freeway mainline.
[2] Maximum queue estimates are based on results from SimTraffic micro-simulation model. Queues are maximum per lane, rounded up to the nearest 25 feet.

Source: Fehr & Peers, 2025.

Mitigation Measure(s)
None required.

Cumulative Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Refer to Chapter 6, Statutorily Required Sections, of this EIR for more detail.

4.13-7 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

With the exception of the improvements to bicycle and pedestrian facilities associated with the proposed project described under Impact 4.13-2, reasonably foreseeable new bicycle or pedestrian facilities are not anticipated to be constructed in the immediate vicinity of the project site under cumulative conditions.

Bicycle, pedestrian, and vehicle travel activity would increase in the site vicinity due to development of the proposed project in combination with other reasonably foreseeable development located on the East Covell Boulevard/Mace Boulevard corridor, such as the Palomino Place, Village Farms Davis, Bretton Woods projects, and DiSC 2022 projects. However, according to the TIS, growth in background travel activity would not materially change the adverse effects to bicycle and pedestrian facilities that would be attributable to the proposed project. Therefore, the project-specific bicycle and pedestrian impact analysis provided in under Impact 4.13-2 would similarly apply

under cumulative conditions. As discussed therein, the proposed project could conflict with a program, plan, ordinance, or policy addressing pedestrian facilities or bicycle facilities, and a ***significant*** cumulative impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

4.13-7 Implement Mitigation Measure 4.13-2.

4.13-8 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below, even with mitigation, the impact is *cumulatively considerable* and *significant and unavoidable*.

Under cumulative conditions, substantial increases in background vehicle travel activity would occur on study area roadways due to reasonably foreseeable land use development elsewhere in and around the City of Davis. Together with the increase in vehicle travel activity caused by the proposed project, as discussed under Impact 4.13-3, including the proposed north leg to the East Covell Boulevard/Alhambra Drive intersection, increases in vehicle travel activity would cause adverse effects to transit operations by increasing transit service delay and running times in a manner inconsistent with Unitrans performance standards.

In addition, the TIS notes that extreme delays and queuing are anticipated on westbound East Covell Boulevard at the Alhambra Drive/Westerly Project Access intersection under cumulative plus project conditions. During the PM peak hour, traffic volumes at that segment would increase from the existing 516 vehicles to 703 vehicles under Existing Plus Project conditions, and to 961 vehicles under Cumulative Plus Project conditions. Project-generated traffic would represent 42 percent of westbound PM peak hour traffic growth on this segment of East Covell Boulevard.

Based on the above, the proposed project, in combination with future buildout of the City of Davis, could conflict with a program, plan, ordinance, or policy addressing transit facilities and services, and a ***cumulatively considerable*** and ***significant*** impact could occur.

Mitigation Measure(s)

The cumulative effects of additional background trips plus the project trips necessitate a second westbound through lane to avoid causing added delays to buses traveling in that direction. The addition of the second westbound travel lane 0.48-mile in length along the project frontage, as required by Mitigation Measure 4.13-8(c), would reduce the average PM peak hour delay per vehicle at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection from about three minutes to 30 seconds. Consistent with the typical street cross-section drawings for East Covell Boulevard

along the project frontage, the project shall dedicate 10 feet of frontage for a Class I multi-use path and 25 feet of frontage for a landscape setback. The width needed for the second westbound travel lane would come from the landscape setback.

Implementation of the following mitigation measures would help reduce the incremental contribution towards the cumulative impact related to a conflict with a program, plan, ordinance, or policy addressing transit facilities and services. A potential indirect effect of Mitigation Measure 4.13-8(c) is induced VMT, which is generally defined as an increase in driving due to reduced travel times from added lane miles. As part of the TIS, the City of Davis cumulative travel demand model was run with and without the 0.48-mile widening of westbound East Covell Boulevard from one to two lanes along the project frontage. The model did not predict any change in total citywide VMT resulting from the widening, although approximately 300 vehicles per day diverted onto the new segment from parallel roadways. However, the City's General Plan Transportation Element includes Map 4, which shows Year 2015 planned number of roadways on streets throughout the City. The map shows East Covell Boulevard having three total travel lanes along the project frontage. Thus, the widening of East Covell Boulevard to add a second westbound travel lane along the project frontage would not represent an inconsistency with the City's General Plan because the General Plan did not study or contemplate roadway lane requirements beyond 2015. Based on the above and consistent with the TIS, impacts associated with induced VMT caused by the lane addition on East Covell Boulevard are less than significant and do not require mitigation.

While Mitigation Measure 4.13-3 (adding westbound right-turn lanes at both project accesses) would benefit operations, the cumulative effects of additional background trips plus the addition of project trips necessitates a second westbound through lane to avoid causing added delays to buses traveling in that direction. The addition of the second westbound travel lane along the project frontage (just under 0.5-mile in length) would reduce the average PM peak hour delay per vehicle at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection from about three minutes (without the improvement) to 30 seconds (with the improvement). Mitigation Measure 4.13-8(b) requires the applicant to pay a fair share toward installation of a second westbound through lane along the project's East Covell Boulevard frontage; however, the remaining fair share contribution sources enabling the construction of the second westbound through lane are not currently known. Additionally, the specific improvements and associated funding sources identified in Mitigation Measure 4.13-8(a) are not known at this time. Due to the uncertainties regarding the ability for the following mitigation to be implemented and/or effective at reducing the impact to a less-than-significant level, the impact would remain *cumulatively considerable* and *significant and unavoidable*.

4.13-8(a) *Prior to occupancy of the first residential unit during Phase 1 of the proposed project, the project applicant shall contribute funding for the completion of a Transit Service and Facilities Plan for the area encompassing the project site and other development along the north side of the Covell Boulevard and Mace Boulevard corridor between the westerly City Limits and the I-80 interchange. The plan shall be led either by Unitrans and Yolobus, or by the City with Unitrans and Yolobus participating as active project partners. The plan shall be*

guided by the Unitrans and Yolobus service development processes and shall be subject to approval by the City of Davis Public Works (Engineering and Transportation) Department. The Transit Service and Facilities Plan shall identify transit service and facility improvements required in accordance with Unitrans and Yolobus policies related to unmet transit needs, timing for improvements, transit service warrants, and performance standards.

Because applicant funds would be contributing toward plan development, the plan shall explicitly focus on implementing transit service and facilities improvements identified in the aforementioned Transit Service and Facilities Plan that would address project-related contributions to unmet transit needs and project-related deficiencies with respect to transit service warrants and performance standards. The proposed project shall not be responsible for funding improvements that address existing deficiencies. Potential transit improvements include, but are not limited to, the following:

1) *Modifying existing transit routes or adding new routes to serve the project site, adding service capacity (through increased headways and/or larger vehicles) to prevent overcrowding and maintain productivity standards.*
2) *Constructing transit priority treatments to improve on-time performance (i.e., transit signal priority and/or Intelligent Transportation Systems (ITS) upgrades at East Covell Boulevard traffic signals, transit queue jumps at East Covell Boulevard intersections, etc.).*
3) *Improving terminal facilities (i.e., stops) to accommodate additional passengers and transit vehicles.*
4) *Implementing transit pass/fare subsidies for residents and employees.*

Improvements shall be selected based on relevant performance data and targeted to address areas not meeting established Unitrans or Yolobus performance standards. Transit facility improvements shall be designed and constructed pursuant to applicable City of Davis, Unitrans, and Yolobus standards.

To implement this mitigation measure, the proposed project shall establish an appropriate funding mechanism (e.g., Community Facilities District or other mechanism determined acceptable by the City) to fund transit service and facilities improvements and adhere to Unitrans and Yolobus policies related to unmet transit needs, transit service warrants, and performance standards. The funding mechanism shall provide funding for capital costs and ongoing operation of transit services. Ongoing annual fees would be identified and paid by the applicant to fund necessary transit service and facility improvements. Fees would be assessed on all future project land uses that generate an increased demand for transit services, including residential, commercial, civic, and recreation land uses. The project's funding



contributions allocated through the funding mechanism shall be limited to improvements and/or portions of improvements that are attributable to the project's contributions to deficient transit service and/or operations. The project shall not contribute funding towards improvements needed to address existing deficiencies and/or improvements needed to address deficiencies attributable to other future land use projects.

Prior to establishing the funding mechanism, the applicant shall submit to the City for review and approval a complete and adequate report supporting the level of assessments/fees necessary for the establishment and continuation of the funding mechanism. The report shall be prepared by a registered engineer, in consultation with a qualified financial consultant. The report shall identify the transit services intended to be funded by the mechanism, the cost to establish and operate these services, the portion of the overall costs to be funded by the applicant, and the assessment/fees to obtain the necessary funding, including a methodology for calculating fee increases over time. A transit service to be explicitly funded by the funding mechanism and included in the report would be the implementation of transit service and facilities improvements necessary to adhere to Unitrans and Yolobus policies related to unmet transit needs, transit service warrants, and performance standards. Project contributions towards ongoing operating costs shall consider other regular established transit funding sources, such as the State of California Local Transportation Fund (LTF) and State Transit Assistance (STA) fund, as well as potential contributions from other future development that would benefit from the transit improvements.

4.13-8(b) *Prior to issuance of any building permits, the project applicant shall pay its fair share toward the installation of a second westbound through lane along the project's East Covell Boulevard frontage, as determined by the City of Davis Department of Public Works Engineering and Transportation.*

4.13-9 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below, even with mitigation, the impact is *cumulatively considerable* and *significant and unavoidable*.

The discussion under Impact 4.13-4 provides an evaluation of potential impacts to VMT associated with the proposed project under Existing Plus Project conditions. Under Existing Plus Project conditions, the proposed project would cause a significant impact to VMT by virtue of resulting in residential VMT per capita measuring above the applicable significance thresholds relative to existing regional residential VMT per capita average. The VMT impact analysis for Existing Plus Project conditions applies to Cumulative Plus Project conditions for the following reasons:

- The VMT significance threshold compares project-generated residential VMT per capita generated to that of existing local and regional development. The comparison is useful because it provides information regarding how the proposed project aligns with long-term environmental goals related to VMT established based on existing development levels. Use of VMT significance thresholds based on existing development levels is recommended in the LCI Technical Advisory on Evaluating Transportation Impacts in CEQA.
- The LCI Technical Advisory on Evaluating Transportation Impacts in CEQA indicates that VMT efficiency metrics, such as residential VMT per capita, are not appropriate for CEQA cumulative analysis. Instead, the Technical Advisory recommends that an impact finding from an efficiency-based project-specific VMT analysis (i.e., Existing Plus Project conditions) would imply an identical impact finding for a cumulative VMT analysis. An example provided by LCI explains that 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.

Based on the above, the cumulative VMT impact associated with the proposed project would be the same as discussed under Impact 4.13-4. Therefore, the proposed project, in combination with future buildout of the City of Davis, would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and a ***cumulatively considerable*** and ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would help reduce the incremental contribution towards the cumulative impact related to conflicting or being inconsistent with CEQA Guidelines section 15064.3, subdivision (b). However, the effectiveness of the TDM strategies cannot be quantified at this time and subsequent vehicle trip reduction effects cannot be guaranteed. Existing evidence indicates that the effectiveness of TDM strategies with regards to vehicle trip reduction can vary based on a variety of factors, including the context of the surrounding built environment (e.g., urban versus suburban) and the aggregate effect of multiple TDM strategies deployed together. Moreover, many TDM strategies are not just site specific, but also rely on implementation and/or adoption by the public (e.g., elective use of carpool program by residents) and other agencies (e.g., transit service operators). Finally, even if implemented, it is uncertain if TDM strategies would be able to sufficiently reduce VMT generated by the project to levels below the thresholds of significance. Therefore, the impact would remain *cumulatively considerable* and *significant and unavoidable*.

4.13-9 Implement Mitigation Measure 4.13-4.

4.13-10 Result in inadequate emergency access associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below, the impact is *less than significant*.

As discussed under Impact 4.13-5, the proposed project would include two vehicular access points along East Covell Boulevard. Altogether, the new connections would provide multiple opportunities and routes for emergency vehicles to access the project

site from different directions. In addition, construction of the anticipated fire station would reduce emergency response times to the site and surrounding neighborhoods relative to existing conditions, and the existing signals at surrounding intersections also provide signal priority to emergency vehicles in the event of an emergency. Furthermore, the design of the on-site roadways and intersections, as well as such development associated with future buildout of the City of Davis, will be subject to the City of Davis Public Works Department Standard Specifications, as well as staff review and approval. Therefore, the proposed project would provide adequate emergency access and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.13-11 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. Based on the analysis below, even with implementation of mitigation, the impact is *cumulatively considerable* and *significant and unavoidable*.

The TIS analyzed peak hour traffic operations to determine the extent to which the proposed project could cause off-ramp queues to spill back to the I-80 and SR 113 mainline. To the extent possible, Caltrans strives to prevent off-ramp queues from extending to the freeway mainline in order to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts).

Table 4.13-5 displays the maximum freeway off-ramp queues at the SR 113/West Covell Boulevard, I-80/Mace Boulevard/Chiles Road, and I-80/CR 32A/CR 32B interchanges under cumulative conditions. Under cumulative conditions, maximum queues would spill back onto the freeway mainline at the West Covell Boulevard/SR 113 Southbound Ramps, West Covell Boulevard/SR 113 Northbound Ramps, Mace Boulevard/I-80 Westbound Off-Ramp, and Chiles Road/I-80 Eastbound Ramp ramp terminal intersections, which would conflict with Caltrans performance expectations related to safety for the State Highway System.

Table 4.13-5
Freeway Off-Ramp Queuing – Cumulative Conditions

Off-Ramp	Off-Ramp Distance[1]	Maximum Queue Length[2] Cumulative Conditions	
		AM Peak Hour	PM Peak Hour
West Covell Boulevard/SR 113 SB Ramps	1,375 feet	1,975 feet	1,175 feet

(Continued on next page)

Table 4.13-5
Freeway Off-Ramp Queuing – Cumulative Conditions

Off-Ramp	Off-Ramp Distance[1]	Maximum Queue Length[2] Cumulative Conditions	
		AM Peak Hour	PM Peak Hour
West Covell Boulevard/SR 113 NB Ramps	1,275 feet	1,350 feet	1,900 feet
Mace Boulevard/I-80 WB Off-Ramp	1,200 feet	2,875 feet	300 feet
Chiles Road/I-80 EB Off-Ramp	1,100 feet	550 feet	1,350 feet
CR 32A/I-80 WB Ramps	1,020 feet	175 feet	200 feet
Chiles Road/CR 32B/I-80 EB Ramps	875 feet	50 feet	50 feet

[1] Measured from the intersection stop bar to the gore point of the freeway off-ramp. Does not include auxiliary lane on freeway mainline.
[2] Maximum queue estimates are based on results from SimTraffic micro-simulation model. Queues are maximum per lane, rounded up to the nearest 25 feet.
[3] Shaded cells represent conditions in which the queue would spill onto the freeway mainline.

Source: Fehr & Peers, 2025.

As shown in Table 4.13-5, the changes associated with the proposed project, in combination with future buildout of the City of Davis, could result in hazards due to a geometric design feature or incompatible uses, and a ***significant*** impact could occur.

Mitigation Measure(s)

Implementation of Mitigation Measure 4.13-11 would reduce the proposed project's contribution to cumulative impacts by preventing off-ramp queues from spilling back onto the SR 113 and I-80 mainlines. However, elements of Mitigation Measure 4.13-11 would occur within Caltrans rights-of-way and would be subject to final approval and actions by Caltrans. Moreover, because the remaining fair share contributions needed for the construction of the improvements have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Therefore, the implementation and effectiveness of Mitigation Measure 4.13-11 cannot be guaranteed and this impact would be *significant and unavoidable*.

4.13-11 *Prior to occupancy of the first residential unit during Phase 1 of the proposed project, to the satisfaction of the City of Davis, the project applicant shall enter into an agreement to contribute fair share funding, as determined by the City of Davis Public Works Engineering and Transportation Department, to cover their proportionate cost of the following improvements:*

- *Covell Boulevard between Shasta Drive/Risling Court and Birch Lane: Coordinate traffic signals, optimize signal timings, and operate with a 140 second cycle length during the AM peak period and a 150 second cycle length during the PM peak period. Such improvements may require controller or communications upgrades.*
- *Mace Boulevard between Alhambra Drive and Cowell Boulevard: Coordinate traffic signals, optimize signal timings,*

and operate with a 150 second cycle length during the AM and PM peak periods. Such improvements may require controller or communications upgrades.

- *West Covell Boulevard/SR 113 Southbound Ramps: Construct a second westbound left-turn lane and a second receiving lane on the southbound on-ramp.*
- *West Covell Boulevard/SR 113 Northbound Ramps: Modify the northbound off-ramp to consist of three lanes approaching West Covell Boulevard, including one left-turn lane, one shared left/through/right lane, and one right-turn lane. Construct a second eastbound left-turn lane.*
- *Mace Boulevard/Second Street/CR 32A: Modify the northbound approach to consist of five lanes, including two left-turn lanes, two through lanes, and a right-turn lane.*
- *Mace Boulevard/I-80 Eastbound Slip On-Ramp: Extend the on-ramp and relocate the ramp meter 500 feet east of its current location to provide more ramp meter vehicle storage.*
- *Mace Boulevard/Chiles Road: Modify the southbound channelized right-turn lane to a standard signal-controlled movement.*
- *Chiles Road/I-80 Eastbound Off-Ramp: Modify the westbound approach to consist of a single through lane. Modify the eastbound approach to consist of two through lanes and begin the second through lane at the Hanlees Davis Toyota driveway.*
- *Mace Boulevard between Second Street/CR 32A and Chiles Road: Construct bicycle and pedestrian facility improvements on this segment of Mace Boulevard. Potential improvement options include a Class I shared-use path, Class II bike lanes, or Class IV separated bikeways. Bicycle facility improvements shall reduce the potential for conflicts involving bicyclists at intersections, crossings, and other mixing zones, including (but not limited to) appropriate pavement markings, signage, and physical separation. Pedestrian facility improvement options include modifications to pedestrian crossings of free/channelized vehicular movements to reduce the speed of turning vehicles and to reduce pedestrian exposure to conflicting vehicular traffic.*

4.14. Utilities and Service Systems

4.14 UTILITIES AND SERVICE SYSTEMS

4.14.1 INTRODUCTION

The Utilities and Service Systems chapter of the EIR summarizes the setting information and identifies potential new demands resulting from the proposed project on utilities and service systems, including water, sanitary sewer, electric power, telecommunication, and solid waste disposal services. The chapter evaluates the sufficiency of water supplies to meet the water demand of the proposed project, the adequacy of the wastewater collection and treatment systems required to serve the proposed project, and compliance with applicable regulations related to solid waste. Information for the Utilities and Service Systems chapter was drawn from a Water Supply Assessment (WSA) prepared by Brown and Caldwell (see Appendix R of this EIR),[1] Wastewater Treatment Plant Capacity Technical Memorandum (WWTP Capacity Memorandum) (see Appendix S of this EIR),[2] and Wastewater Collection System Technical Memorandum (Wastewater Collection Memorandum)[3] prepared by West Yost (see Appendix T of this EIR). The reader will note that these documents were prepared principally for the proposed Village Farms Davis project, but each source document also includes an analysis of the Shriners Property (i.e., Willowgrove) project, and as such, the documents can be used for analysis of the Willowgrove project. Further information was sourced from the City of Davis General Plan[4] and the associated General Plan EIR[5]. In addition, a Capacity Analysis Evaluation Interim Findings was prepared by Brown and Caldwell and is included as Appendix U to this EIR.[6]

Impacts related to groundwater supplies and stormwater drainage are addressed in Chapter 4.8, Hydrology and Water Quality, of this EIR.

4.14.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing utilities and service systems in the vicinity of the project site, including water supply, wastewater conveyance and treatment, solid waste, and gas, electric, and telecommunication infrastructure.

Water Supply

The project site is currently located in an unincorporated portion of Yolo County. Upon annexation of the site into the City Limits, the City of Davis would be responsible for providing water to the site. The City of Davis provides water service to all residential, commercial, industrial, and irrigation customers within the City Limits. Water is also provided by the City for open space and fire protection uses.

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1 Brown and Caldwell. *Water Supply Assessment for City of Davis: Village Farms Davis, Shriners, Palamino Place, and DiSC 2022*. April 24, 2024.
2 West Yost. *Technical Memorandum: Davis WWTP Capacity Impacts of Proposed Village Farms Development*. April 23, 2024.
3 West Yost. *Technical Memorandum: Collection System Impacts of Proposed Village Farms Development*. April 23, 2024.
4 City of Davis. *City of Davis General Plan.* Adopted May 2001, Amended January 2007.
5 City of Davis. *Draft Program EIR for the City of Davis General Plan Update and Project EIR for Establishment of a New Junior High School.* Certified May 2001.
6 Brown and Caldwell. *Capacity Analysis Evaluation Interim Findings*. November 7, 2025.

As shown in Figure 4.14-1, which includes the City's current service area as well as additional service areas associated with future proposed development projects, the City's water system serves customers within the City of Davis, the El Macero and Willowbank County Service Areas (CSAs), and the Davis Creek Mobile Home Park.

An additional CSA known as North Davis Meadows (NDM) is located north of the City, within the City's water service area, but is pending connections to the City's water system. The system is supplied surface water from the Woodland-Davis Clean Water Agency (WDCWA) Regional Water Treatment Facility (RWTF) and groundwater from local wells. A portion of the WDCWA surface water is delivered to UC Davis through the surface water transmission main owned and maintained by the City prior to delivery to UC Davis's transmission main.

Surface Water

The City of Davis began participating in the WDCWA in 2016. The WDCWA was created in 2009 to convey water from the Sacramento River, transmit the water for treatment to the RWTF, and deliver wholesale treated surface water to the cities of Davis and Woodland, as well as UC Davis, for use in their respective service areas.

According to the WSA, WDCWA has two separate surface water rights: 45,000 acre-feet per year (AFY) from Permit 20281 from the State Water Resource Control Board (SWRCB), and up to 10,000 AFY from a supplemental water right purchased from the Conaway Preservation Group (CPG). Both surface water rights have conditions that can limit WDCWA's ability to divert water. Permit 20281 is subject to the SWRCB's Term 91, which requires permittees to cease diverting water when the State Water Project and the Central Valley Project are releasing stored water to meet water quality and flow requirements in the Sacramento-San Joaquin Delta.

The CPG water right is subject to limitation based on Lake Shasta water levels. The City is entitled to deliveries of 10.2 million gallons per day (mgd) from the WDCWA in a normal year, totaling approximately 11,420 AFY. Table 4.14-1 summarizes the projected wholesale surface water supplies for a normal year, a single dry year, and multiple dry years. The City does not anticipate any agreement changes with the WDCWA.

Table 4.14-1
Projected Wholesale Surface Water Supply, AFY

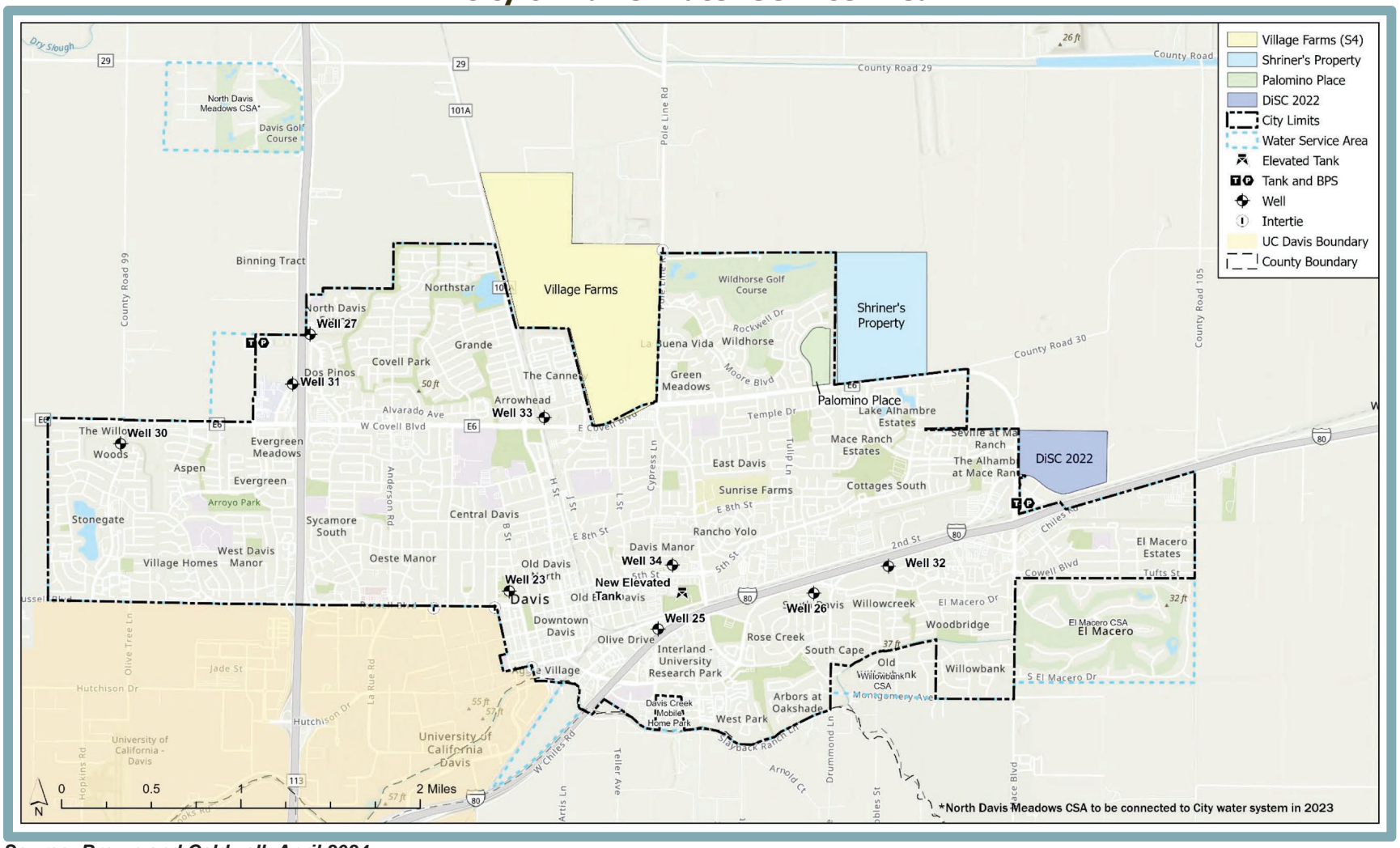
Year Type	2025	2030	2035	2040	2045
Normal Year	10,520	10,520	10,520	10,520	10,520
Single Dry Year	2,460	2,460	2,460	2,460	2,460
Multiple Dry Years	2,460	2,460	2,460	2,460	2,460

Source: Brown and Caldwell, April 2024.

Groundwater

The City pumps groundwater from the Yolo Subbasin, which is a portion of the larger Sacramento Valley Groundwater Basin. According to the WSA, the Department of Water Resources (DWR) does not consider the basin to be in overdraft. Municipal water users of the Yolo Subbasin include the cities of Davis, Woodland, and Winters; UC Davis; various community services districts and areas within Yolo County; Reclamation Districts 150, 307, and 999; and the Yolo County Flood Control and Water Conservation District (YCFCWCD).

Figure 4.14-1
City of Davis Water Service Area



Source: Brown and Caldwell, April 2024.

Areas outside of the cities and community service districts are predominantly agricultural. Most agricultural areas to the north of the City use groundwater, while other agricultural users within Yolo County are able to use surface water from the Sacramento River, Colusa Basin Drain, Putah Creek, Cache Creek, Yolo Bypass, Tule Canal, Willow Slough, and the Tehama-Colusa Canal.

The aquifer system under the Yolo Subbasin includes the upper Tehama Formation and is generally divided into three zones: shallow, intermediate, and deep. The City's major groundwater production zones for water supply are the intermediate and deep aquifer zones. The distinction is based on water chemistry, though both zones are geologically part of the larger Tehama Formation. The intermediate aquifer begins at a depth of approximately 200 feet and the deep aquifer at 700 feet below ground surface. Groundwater in the deep aquifer is more desirable for residential uses, while groundwater from the intermediate aquifer is more suited for irrigation water uses. Overall, high-quality water exists in the portion of the aquifer from which public community water systems draw.

According to the WSA, the projected sustainable yield of the Yolo Subbasin is 346,000 AFY. In addition, according to the Davis 2020 Urban Water Management Plan (UWMP), the groundwater storage capacity of the Yolo Subbasin between the depths of 20 to 420 feet is approximately 6.5 million AFY.[7] Seasonal variations show the shallowest depth to water levels occurs in the spring (March/April) with greatest depths in summer (July/August), when groundwater levels are at their lowest. The City tracks groundwater levels in the intermediate and deep wells, which generally decline during dry conditions due to continued reliance on groundwater for agricultural and municipal demands. However, groundwater levels substantially recover during wet years. Over the years, the depth to water was greatest from 2013 to 2015 and from 2021 to 2022 during the recent droughts. Groundwater levels rebounded after 2015 with the start of conjunctive-use programs that coordinate the use of both surface water and groundwater, and were consistent from 2018 to 2020. Similarly, groundwater levels have since rebounded again after notable wet seasons in 2021 through 2023.

The Yolo Subbasin is subject to the 2014 Sustainable Groundwater Management Act (SGMA), which became effective January 31, 2015. The SGMA applies to the 127 high and medium priority groundwater basins designated by DWR Bulletin 118, which account for approximately 96 percent of groundwater use in California. The Yolo Subbasin is designated as a high priority subbasin under the SGMA. The SGMA requires high and medium priority basins subject to critical conditions of overdraft to be managed under a Groundwater Sustainability Plan (GSP) by January 31, 2020 (Water Code Section 10720.7[a][2]). In addition, the SGMA requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally based management plans. The SGMA provides substantial time (20 years) for GSAs to implement plans and achieve long-term groundwater sustainability.

The Yolo Subbasin Groundwater Agency (YSGA), which includes the City of Davis as a member agency, adopted the Yolo Subbasin GSP on January 24, 2022.[8] The Yolo Subbasin GSP was approved by DWR on October 26, 2023. The Yolo Subbasin GSP establishes various standards, including, but not limited to, sustainability goals, minimum thresholds for groundwater conditions, interim milestones, monitoring protocols for the collection of groundwater, and reporting standards. Table 4.14-2 summarizes the projected groundwater supplies for a normal year, a single dry year, and multiple dry years. The City's groundwater supply would meet demands

[7] City of Davis. *2020 Urban Water Management Plan.* June 15, 2021.
[8] Yolo Subbasin Groundwater Agency. *2022 Groundwater Sustainability Plan*. Adopted January 24, 2022.

during dry years when minimal surface water supply is available. During a dry year, the City's surface water supplies would be reduced, but groundwater supplies would be increased to meet demands.

Table 4.14-2
Projected Groundwater Supply, AFY

2025	2030	2035	2040	2045
12,800	12,800	12,800	12,800	12,800

Source: Brown and Caldwell, April 2024.

Water Delivery

The City's water distribution system includes three water storage tanks, seven groundwater wells comprised of five deep aquifer wells and two intermediate wells, and 191 miles of distribution and transmission mains.[9] The three water storage tanks include the Elevated Tank, West Area Tank, and the East Area Tank. The three tanks have a combined storage of 8.2 million gallons. The West Area Tank has a booster pumping capacity of 3,750 gallons per minute (gpm) and the East Area Tank has a total pumping capacity of 7,400 gpm. The West and East Area Tanks fill during off-peak demand periods, and the booster station pumps send water back into the system during peak periods based on time and system pressure.

The City's water pipes range from two to 14 inches in diameter. Approximately 90 percent of the distribution system consists of six- to 10-inch diameter pipelines. The City's pipeline system was originally constructed to support localized supply, with wells spread throughout the City, which did not require large diameter transmission mains. However, as a result of the changes to the City's water supply system, treated surface water from the RWTF is distributed by way of a six-mile, 30-inch pipeline along Pole Line Road.

Currently, the City of Davis maintains a 12-inch domestic water line within East Covell Boulevard to the south of the project site.

Wastewater Collection and Treatment

The project site is currently located in an unincorporated portion of Yolo County. Upon annexation of the site into the City Limits, the City of Davis would be responsible for providing wastewater conveyance and treatment services to the site. The City of Davis provides wastewater conveyance and treatment for all residents and businesses within the City of Davis and the unincorporated areas of North Davis Meadows, El Macero, Davis Creek Mobile Home Park, and the Teichert Construction Complex.

Wastewater Treatment Plant Capacity

The City of Davis is authorized by the Central Valley Regional Water Quality Board (RWQCB) to discharge treated wastewater from the City's wastewater treatment plant (WWTP) under Order R5-2025-0026 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079049, effective as of August 1, 2025.[10] Under the Permit Order, the WWTP is permitted to treat an average dry-weather flow (ADWF) of 7.5 mgd. ADWF is defined as the average of the

[9] City of Davis. *City Water Infrastructure.* Available at: https://www.cityofdavis.org/city-hall/public-works-utilities-and-operations/water/city-water-infrastructure. Accessed July 2025.

[10] Central Valley Regional Water Quality Control Board. *Order R5-2025-0026, NPDES No. CA0079049, Waste Discharge Requirements for the City of Davis Wastewater Treatment Plant, Yolo County.* Adopted August 2025.

three consecutive lowest-flow calendar months. For the City of Davis, the foregoing period usually coincides with the period of July through September.

The existing treatment system design capacity is 6.0 mgd ADWF. The City has the ability to discharge treated wastewater from six different discharge points (Discharge Point Nos. 001, 002, 003, 004, 005, and 006). Discharge 001, 002, and 003 are surface water discharges and 004, 005, and 006 are groundwater discharges. The treatment system for all discharge points consists of mechanical bar screens, aerated grit removal, primary sedimentation, aeration basins including nitrification and denitrification, secondary clarification, tertiary filtration, chlorine disinfection with sodium hypochlorite, dechlorination with sodium bisulfite, and reaeration. Prior to the discharge at Discharge Point No. 002, the disinfected effluent passes through treatment wetlands. Each discharge point is located in a different surface water or groundwater discharge location. Treated wastewater is discharged from Discharge Point No. 001 to the Willow Slough Bypass, a water of the U.S., and part of the Yolo Bypass flood protection structure within the Sacramento River watershed. Treated wastewater is discharged from Discharge Point No. 002 to the Conaway Ranch Toe Drain, a water of the U.S., and a part of the Yolo Bypass within the Sacramento River watershed when there is risk of flooding in the Davis Wetlands. Treated wastewater is discharged from Discharge Point No. 003 to the Main Conway Canal, a water of the U.S., between May 1 through October 31 of each year for agriculture and habitat purposes. Treated Wastewater is discharged from Discharge Point No. 004 (Davis Wetlands) during various times of the year for habitat enhancement purposes. Stormwater and treated wastewater are discharged from Discharge Point No. 005 (Stormwater/Auxiliary Emergency storage Ponds) when there is no capacity left in the emergency storage ponds or the stormwater channel exceed 2 ft. of freeboard during winter months. Recycled water is discharged from the Recycled Water Storage Ponds when the Yolo County Landfill and/or Napa Recycle Compost Facility purchases recycled water from the City of Davis for various purposes.

Wastewater Collection System

The City of Davis wastewater collection system conveys wastewater for the area within the City Limits to the WWTP, located at 45400 County Road (CR) 28H. The collection system includes 164 miles of gravity sewers, 3,224 manholes, six pump stations, 2.63 miles of force mains ranging in size from four to 14 inches, and approximately 123 miles of sewer laterals.[11]

Within the project site vicinity, the existing sewer collection system includes a 42-inch sewer line along the northern boundary of the project site and a 24-inch sewer line along, and just outside of, the eastern boundary of the project site.

Solid Waste Disposal

Solid waste collection and disposal in the City of Davis is provided by Recology Davis, which was renamed from Davis Waste Removal. Recology Davis has a drop-off and buy-back center and provides residential curbside, apartment, and business collection services. In addition to the weekly garbage service, Recology Davis provides green waste and recycling pickup and street sweeping service. Recoverable items include mixed paper, glass, aluminum cans, steel and tin cans, some plastics, corrugated cardboard, yard waste, and used motor oil. In July of 2016, Recology Davis began an organics collection program to allow for collection of organic material

[11] City of Davis. *Wastewater.* Available at: https://www.cityofdavis.org/city-hall/public-works-utilities-and-operations/wastewater. Accessed July 2025.

and food waste. The program will help achieve the City's goal of diverting waste sufficient to reduce citywide waste disposal to zero pounds per person per day by year 2025.

All non-recyclable, non-organic waste generated by the City of Davis is disposed of at the 770-acre Yolo County Central Landfill, which is located off CR 28H, near its intersection with CR 104. The landfill is owned and operated by the Yolo County Department of Public Works and Transportation. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Yolo County Central Landfill is permitted to accept a maximum of 49,035,200 cubic yards (CY) of waste.[12] The landfill has a remaining capacity of 33,140,373 CY and is anticipated to operate through the year 2124. The landfill also includes a recycling drop-off facility, a wood-processing facility, and a methane gas collection facility, and accepts drop-offs of household hazardous waste free to County residents on designated Saturdays.

Electricity and Natural Gas

Gas and electric service in the City of Davis has been historically provided by Pacific Gas & Electric Company (PG&E) under a franchise granted to PG&E by the City. Based in San Francisco, PG&E is an investor-owned utility and the largest provider of gas and electric services in northern and central California. PG&E provides electricity to roughly 5.1 million customers and provides natural gas to nearly 4.2 million customers. A mix of generating sources, including hydropower, gas-fired steam, and nuclear energy, powers the electric system.

On October 25, 2016, the Davis City Council adopted Resolution Number 16-153, Series 2016, which approved the Joint Exercise of Powers Agreement with Yolo County to form the Valley Clean Energy Alliance, which is now referred to as simply Valley Clean Energy (VCE). The resolution adopted by the City, along with similar resolutions adopted by the City of Woodland and Yolo County, led to the formation of the VCE joint powers authority. Beginning in June 2018, the VCE began serving the electricity needs of the cities of Woodland, Davis, and unincorporated areas of Yolo County. Customers within the participating areas have the opportunity to continue receiving service from PG&E or receive energy from VCE. While VCE supplies the energy for customers enrolled in the VCE program, VCE electricity is transmitted through PG&E-owned-and-operated distribution and power lines.

Telecommunications

Residents in Davis subscribe to a mix of wireline providers and resellers including AT&T of California, Comcast, Omsoft, and Davis Community Network. A few businesses also use fixed wireless providers, including DigitalPath, Inc. and Winters Broadband.

Comcast has provided six strands of fiber to 22 "Major Facilities" throughout the City and connects three Yolo County facilities located within the City of Davis, which provides interconnection with the greater Yolo County fiber network. The Comcast network, known as the "I-Net" or Institutional Network, enables the City to provide connectivity for municipal operations, utilities, public safety, and general administration.[13]

[12] California Department of Resources Recycling and Recovery. *SWIS Facility/Site Activity Details Yolo County Central Landfill (57-AA-0001)*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/689?siteID=4033. Accessed July 2025.

[13] Magellan Advisors, LLC. *Final Yolo Broadband Strategic Plan*. March 26, 2015.

4.14.3 REGULATORY CONTEXT

The following discussion contains a summary of regulatory controls pertaining to utilities and service systems, including federal, State, and local laws and ordinances.

Federal Regulations

The federal environmental policies and regulations relevant to utilities and service systems are primarily related to water quality, which is addressed in Chapter 4.8, Hydrology and Water Quality, of this EIR.

State Regulations

The following are the State environmental policies and regulations relevant to utilities and service systems.

California Green Building Standards Code

The 2022 California Green Building Standards Code, otherwise known as the CALGreen Code (California Code of Regulations [CCR] Title 24, Part 11), is a portion of the California Building Standards Code (CBSC), which became effective on January 1, 2023. The CBSC is adopted every three years by the Building Standards Commission (BSC).

The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The CALGreen standards regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the current CALGreen Code include, but are not limited to, the following measures:

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the DWR's Model Water Efficient Landscape Ordinance (MWELO);
- 65 percent of construction and demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle (EV) charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

The CALGreen standards also include voluntary efficiency measures that are provided at two tiers and implemented at the discretion of local agencies and applicants. According to Section A4.602 of Appendix A4 of the CALGreen Code, CALGreen's Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 65 percent diversion of construction and demolition waste, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter

water conservation, 80 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs. The City of Davis has adopted Tier 1 of the CALGreen standards.

Senate Bill 7

On September 25, 2016, Senate Bill (SB) 7 was signed into law. The purpose of SB 7 is to further the State's water conservation efforts by requiring that new apartment buildings constructed after January 1, 2018, include submeters for every rental unit. Specifically, the bill authorizes the Department of Housing and Community Development to develop, and propose for adoption, building standards that require the installation of water meters or submeters in multi-family residential buildings. In addition, if submeters are used to charge tenants separately for water use, SB 7 imposes requirements on landlords related to sub-metered water service to individual dwelling units.

California Water Code

The California Water Code requires coordination between land use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted and that planned water supplies are adequate to meet both existing demands and the demands of planned development.

Water Code Sections 10910 through 10915 (inclusive), sometimes referred to as SB 610, require land use lead agencies: 1) to identify the responsible public water purveyor for a proposed development project, and 2) to request from the responsible purveyor a WSA. The purposes of the WSA are (a) to describe the sufficiency of the purveyors' water supplies to satisfy the water demands of the proposed development project, while still meeting the current and projected water demands of customers, and (b) in the absence of a currently sufficient supply to describe the purveyor's plans for acquiring additional water. Water Code Sections 10910 through 10915 delineate the specific information that must be included in the WSA.

As stated in CEQA Guidelines Section 15155, which reflects SB 610 requirements, any development with water demand exceeding the equivalent demand associated with 500 dwelling units is considered a "water-demand project" and is required to prepare a WSA. The proposed project would include a total of 1,250 dwelling units. Thus, a WSA is required for the proposed project.

California Integrated Waste Management Act – Assembly Bill 939

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective County plans, which must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to $10,000-per-day fines.

In 2007, SB 1016 amended portions of AB 939, which allows the California Integrated Waste Management Board (CIWMB) to use per capita disposal as an indicator in evaluating compliance

with the requirements of AB 939. Jurisdictions track and report their per capita disposal rates to CalRecycle.

Assembly Bill 1327

AB 1327, the Solid Waste Reuse and Recycling Access Act of 1991, requires jurisdictions to adopt ordinances requiring development projects to provide adequate storage area for collection and removal of recyclable materials. The City of Davis has adopted a solid waste management ordinance under Chapter 32 of the Davis Municipal Code.

Assembly Bill 1881

AB 1881, the Water Conservation in Landscaping Act of 2006, required the DWR to update the MWELO. AB 1881 also required local agencies to adopt the updated model ordinance or an equivalent ordinance by January 1, 2010. If local jurisdictions failed to adopt the updated model ordinance or an equivalent by January 1, 2010, the DWR's updated model ordinance would automatically be adopted by statute. The City has adopted the MWELO (City of Davis Municipal Code Section 39.02.045[a][4]).

Local Regulations

The following are the local policies and regulations relevant to utilities and service systems.

City of Davis General Plan

The applicable Davis General Plan policies and standards related to utilities and service systems are presented below.

Water Chapter

Goal WATER 1 Minimize increases in water use. Reduce per capita water consumption by 20 percent as compared to historic use through programs encouraging water conservation.

- Policy WATER 1.1 Give priority to demand reduction and conservation over additional water resource development.
- Policy WATER 1.2 Require water conserving landscaping.
- Policy WATER 1.3 Do not approve future development within the City unless an adequate supply of quality water is available or will be developed prior to occupancy.

Goal WATER 5 Remain within the capacity of the City wastewater treatment plant.

- Policy WATER 5.1 Evaluate the wastewater production of new large scale development prior to approval to ensure that it will fall within the capacity of the plant.
- Policy WATER 5.2 Provided that the existing plant capacity is not exceeded, require new large scale development to pay its fair share of the cost of extending sewer service to the site.

Materials, Solid Waste and Recycling Chapter

Goal MAT 1 Enhance the quality of the environment by conserving resources and minimizing waste by reducing, reusing, recycling, and re-buying.

Policy MAT 1.1 Promote reduced consumption of non-renewable resources.

Goal MAT 2 Provide adequate waste disposal capacity for Davis.

Policy MAT 2.1 Plan for the long-term waste disposal needs of Davis.

Davis Municipal Code

The Davis Municipal Code ordinances related to utilities and service systems that are applicable to the proposed project are presented below.

Davis Municipal Code Chapter 32, Management of Solid Waste

Davis Municipal Code Article 32.01 contains various requirements and standards for existing and new developments related to solid waste, including specific regulations for waste collection service in individually serviced residences, commercial businesses, and other generators, including multi-family residences. Additionally, Article 32.04 of the Municipal Code establishes requirements for the diversion of construction and demolition debris, including requiring construction projects to provide proof of diversions.

Davis Municipal Code Article 38.01, Underground Utility Districts

Davis Municipal Code Article 38.01 requires that if underground construction is necessary to provide utility service within an area where poles, overhead wires, and associated overhead structures are prohibited, the supplying utility must furnish that portion of the conduits, conductors, and associated equipment required, consistent with the requirements established by the California Public Utilities Commission. Underground construction must occur in accordance with established construction standards and completed in such time to allow for the removal of overhead facilities deemed to be a risk to public health and safety.

Davis Municipal Code Article 40.42, Water Efficient Landscaping

The purpose of the landscaping standards set forth by Davis Municipal Code Article 40.42 is to comply with the Water Conservation in Landscaping Act of 2006, Government Code Sections 65591 et. seq. and to establish standards and procedures that promote the design, installation, and management of water-efficient landscaping. Article 40.42 applies to residential projects with developer-installed and homeowner-provided landscaping, non-residential projects and public agency projects, existing landscaping, and cemeteries.

City of Davis 2020 Urban Water Management Plan

In June 2021, the City of Davis prepared the UWMP to address current and future water demands and supplies, as required by the Urban Water Management Planning Act of 1983. The UWMP also discusses the conservation and efficient use of water in the City's service area, and the development and implementation of plans to assure reliable water service in the future. The UWMP contains projections for future water use, discusses the reliability of the City's water supply, describes the City's water treatment system, and contains a water shortage contingency plan. The UWMP also contains demand management measures to reduce water demands.

4.14.4 IMPACTS AND MITIGATION MEASURES

The section below describes the standards of significance and methodology used to analyze and determine the potential impacts related to utilities and service systems associated with the proposed project. In addition, a discussion of the specific potential impacts, as well as mitigation measures where necessary, are also presented.

Standards of Significance

In accordance with Appendix G of the CEQA Guidelines, impact determinations regarding utilities and service systems require consideration as to whether the proposed project would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- 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;
- 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; or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impacts related to groundwater supplies and stormwater drainage facilities are addressed in Chapter 4.8, Hydrology and Water Quality, of this EIR.

Method of Analysis

Information related to water supply was primarily drawn from the WSA (see Appendix R of this EIR) prepared by Brown and Caldwell. Information related to wastewater conveyance and treatment was primarily drawn from the Wastewater Collection Memorandum (see Appendix T of this EIR) and WWTP Capacity Memorandum (see Appendix S of this EIR), respectively, both of which were prepared by West Yost. The method of analysis used in each of the aforementioned assessments is discussed further below.

Water Supply Assessment

Water supply projections for the City's existing water service area are discussed above in the Existing Environmental Setting section of this chapter and are based on projections included in the City's Draft 2023 Water System Optimization Plan (WSOP), which was prepared by Brown and Caldwell and includes a revised water demand analysis and updated supply projections, making the water demand and supply analysis in the 2023 WSOP more current than what was included in the City's 2020 UWMP. The projected water demands for the existing water service area (excluding UC Davis, but including North Davis Meadows) in the WSA are based on the 2023 WSOP and are summarized in Table 4.14-3. The water demand projections for 2025 through 2045 assume a normal water year type and do not include the proposed project.

Table 4.14-3
Historical and Projected Water Demands by Sector for the Existing Water Service Area (AFY)[1,2,3]

Year	2021	2022	2025	2030	2035	2040[4]	2045[4]
Single-Family Residential	5,130	4,820	5,100	5,350	5,260	5,200	5,200
Multi-Family Residential	1,930	2,070	1,750	1,886	1,860	1,840	1,840
CII[5]	860	870	600	800	840	850	850
CII Irrigation	1,320	1,320	1,410	1,440	1,510	1,570	1,570
Losses	980	820	930	830	830	840	840
Total	**10,120**	**9,910**	**9,790**	**10,310**	**10,300**	**10,290**	**10,290**

1 Individual values are rounded to nearest 10, which may result in some rounding errors in totals.
2 Based on data from the 2023 WSOP.
3 Demands are the same as those in a normal year, but dry years are projected to include water demand that will increase in the summer due to decreased precipitation and increased evapotranspiration (Eto) rates.
4 Demand levels off due to the City reaching single- and multi-family buildout in 2029 and 2031, respectively. Full buildout is estimated to occur in 2039 and reduction occurs in projected demands due to water savings.
5 Commercial, Industrial, and Institutional.

Source: Brown and Caldwell, April 2024.

To calculate the projected water demands for the proposed project, the WSA relied upon potable water demand data provided by the project's engineer, Carlson Barbee and Gibson (CBG). The potable demand estimate of 570 AFY is higher than the estimate (455 AFY) using the unit water demand factors (UWDFs) from a 2015 WSA prepared for the City of Davis by Brown and Caldwell. The 2015 WSA UWDFs have been found to be typically conservative.

The projected water demands for the proposed project are summarized in Table 4.14-4.

Wastewater Collection System Technical Memorandum

An analysis completed by West Yost in 2022 established a then-current per capita ADWF of 62 gallons per day (gpd) per capita, based on WWTP influent flow data for non-drought years in 2012, 2013 and 2017 through 2019. Since then, another non-drought year occurred in 2023. With the addition of 2023 flows, the Wastewater Collection Memorandum updated current ADWF per capita flows to be slightly lower at 61 gpd per capita. The preferred methodology in the Wastewater Collection Memorandum for establishing service area population was as follows:

1. The population density was assumed to be 2.4 persons per equivalent dwelling unit (EDU), based on a review of recent U.S. Census information and discussions with City Staff; and
2. The service population for the existing sewer connections was estimated from the 2.4 persons/EDU times the number of EDUs. The actual service area population may be slightly lower (based on recent U.S. Census data); however, this approach adds an appropriate level of conservatism to the analysis.

The Wastewater Collection Memorandum evaluated four development scenarios: existing development conditions within City Limits (Scenario 1); existing development conditions including the approved and reasonably foreseeable projects identified in Table 4.14-5, respectively (i.e., buildout conditions) (Scenario 2); existing development conditions plus the Village Farms Davis project (Scenario 3); and the City's General Plan buildout conditions plus the Village Farms Davis project (Scenario 4). The table from the Memorandum has been modified and reproduced below to include the sewer generation estimates for the Willowgrove project in the "plus project" scenarios.

Table 4.14-4
Projected Water Demands for the Proposed Project

Land Use Designation	Estimated City Billing Classification	Acres	Dwelling Units	Dwelling Units/Acres	From Willowgove Provided Demands on March 7, 2024 [a]			Based on 2015 WSA UWDFs		
					Unit Water Demand Factor[b] (gpd/unit or acre-feet/acre/year)	Average Day Demand (gpm)	Average Day Demand (AFY)	Unit Water Demand Factor (gpd/unit or gpd/acre)	Average Day Demand (gpd)	Average Day Demand (AFY)
Low Density Residential	Single Family Residential	49.2	193	4	450	64.8 (93,312 gpd)	105	345	66,585	75
Medium Density Residential	Single Family Residential	73.5	520	7	225	87.4 (125, 856 gpd)	141	345	179,400	201
High Density Residential	Multi-Family Residential	22.5	487	22	225	81.8 (117,792 gpd)	132	174	87,438	95
Park/Open Space/Greenbelts/Paseos	Irrigation	27.8	--	--	4.0 and 4.3	119.6 (172,224 gpd)	193	2,712 (3.0 acre-feet/acre/year)	75,394	84
Non-Irrigated Open Space	--	48.87	--	--	--	--	--	--	--	--
Total	--	222	1,200[d]	--	--	509,148	570	--	317,197	455

[a] Per Shriners Preliminary Potable Water Demands table provided by City Staff on March 7, 2024.

[b] Unit Water Demand Factors per Shriners Preliminary Potable Water Demands table provided by City Staff on March 7, 2024.

[c] Non-irrigated area has zero demand

[d] While the water demand estimate for the proposed project included in the WSA was based on 1,200 units, the estimate has since been refined by the project engineer CBG, and shown to be less (564 AFY) than 570 AFY even when accounting for the 50-unit increase. Ongoing refinements include but are not limited to adjustments to some lot lines and greenbelt boundaries. With respect to land use demand, the WSA used five land uses while CBG's updated calculations divide the areas into eight land uses. This allowed CBG to more accurately model the demand for each area. For example, water demand for street right-of-ways is calculated differently than it is for residential. The WSA lumped streets with residential, while CBG's updated estimate separates them.

Source: Brown and Caldwell, April 2024; CBG, March 2025

Total EDUs for each of the foregoing scenarios were established from the EDU values listed above in conjunction with a City Staff-derived estimate for the total existing unit count within the City Limits of 28,553 EDUs. Corresponding service area populations were established by multiplying the total EDUs by 2.4 persons per EDU. Those populations were then multiplied by the current ADWF per capita of 61 gpd per capita to obtain estimates of the ADWF for each scenario. The total EDUs for Scenarios 1 through 4 are summarized in Table 4.14-5.

Table 4.14-5
Total EDUs, Service Area Populations, and ADWFs for Scenarios 1 through 4

Scenario	Total Dwelling Units (EDUs)	Estimated Service Area (persons)[1]	ADWF (mgd)[2]
Existing City Limits	28,553	68,530	4.2
Buildout[3]	32,010	76,820	4.7
Existing Plus Proposed Project[4]	29,753	71,407	4.4
Buildout Plus Proposed Project	33,210	79,700	4.9

1 Population = EDUs X 2.4 persons per EDU.
2 ADWF = population X 61 gpd per capita.
3 Buildout = existing connections plus Nishi, Bretton Woods, DiSC 2022 and Village Farms Davis residential connections and DiSC 2022 non-residential connections.
4 Modifications made to reflect Willowgrove in the "Plus Proposed Project" scenarios.

Source: West Yost, April 2024

For buildout conditions, several previously approved developments need to be considered in the current analysis. These proposed developments include the following:

- Nishi development, located in the triangle between Interstate 80 (I-80), the Union Pacific Railroad (UPRR), and the western end of Olive Drive;
- Bretton Woods development, located in west Davis north of Covell Boulevard and west of Sutter Davis Hospital;
- Davis Innovation and Security Campus (DiSC) 2022 development, which includes the Mace Triangle property and is located on the northeast side of the City, north of I-80 and east of Mace Boulevard;
- Village Farms Davis, located northwest of East Covell Boulevard and Pole Line Road; and
- Palomino Place project, located at the southeast corner of the Wildhorse Ranch.

The Palomino Place project is within the existing City Limits, and wastewater generation from the area is already accounted for in the City's existing sewer system model. Therefore, Palomino Place does not require further consideration.

The other four developments would consist of 700, 240, 460 and 1,800 residential EDUs, respectively. The DiSC 2022 development also includes 58 acres of non-residential development, equivalent to 257 EDUs using 2.4 persons per EDU and 61 gpd/capita from the West Yost analysis combined with a unit wastewater flow factor of 647 gpd per acre from the Mace Ranch WSA and a study on the Impacts of Innovation Center/Nishi Property Development on WWTP Capacity. The combination of existing sewer connections plus connections from the four foregoing developments, all of which are outside the existing City Limits, is referred to as "buildout" conditions.

The ADWF for the buildout scenario in the Wastewater Collection Memorandum hydraulic model totaled 4.27 mgd, whereas the buildout ADWF from the WWTP Capacity Memorandum totaled 4.32 mgd. To align the two analyses, the buildout flows in the hydraulic model were scaled up to match the buildout flow value from the WWTP Capacity Memorandum.

The modeled buildout peak wet weather flows (PWWF) values and flow depth (d) to pipe diameter (D) (d/D) results, both with and without the proposed project, are shown in Table 4.14-6 for each of the gravity mains between East Covell Boulevard and the WWTP.

Wastewater Treatment Plant Capacity Technical Memorandum

The WWTP Capacity Memorandum builds upon a capacity analysis of the WWTP completed by West Yost for the City in 2022, which provided then-current WWTP influent flows, loads and service area population, and defined the capacity of each WWTP process unit in terms of ADWF. The 2022 West Yost capacity analysis identified the WWTP's ADWF capacity as 4.3 mgd, the average of ADWFs for the recent non-drought years 2012, 2013 and 2017 through 2019.

The associated service area population for the current ADWF was about 69,000 people, and the associated per capita ADWF was 62 gpd per capita.

A target design ADWF of 5.3 mgd was established in the 2022 West Yost capacity analysis using the 62 gpd per capita and a previously established design population for the WWTP of 85,700 people. Thus, the WWTP Capacity Memorandum identified the WWTP's ADWF capacity as 5.3 mgd. The WWTP Capacity Memorandum evaluated the same four development scenarios used in the Wastewater Collection Memorandum. As previously discussed, the buildout ADWF in the Wastewater Collection Memorandum hydraulic model totaled 4.27 mgd, whereas the buildout ADWF from the WWTP Capacity Memorandum totaled 4.32 mgd. To align the two analyses, the buildout flows in the hydraulic model were scaled up to match the buildout flow value from the WWTP Capacity Memorandum. The WWTP Capacity Memorandum relied on the following information:

- The total EDUs anticipated for existing and planned sewer connections within the City Limits is 28,553 EDUs, which includes Palomino Place;
- Buildout of the collection system also includes the Nishi, Bretton Woods, DiSC 2022, and Village Farms Davis developments, which would consist of 700, 240, 460, and 1,800 EDUs, respectively;
- The DiSC 2022 development also includes 58 acres of non-residential development, equivalent to 257 EDUs using 2.4 persons per EDU and 61 gpd/capita from the West Yost analysis combined with a unit wastewater flow factor of 647 gpd per acre from the Mace Ranch WSA and a study on the Impacts of Innovation Center/Nishi Property Development on WWTP Capacity;
- The proposed project would add an additional 1,200 EDUs;[14]
- The total EDUs that must be accounted for through the capacity study is 33,210 EDUs; and

[14] The Buildout estimate assumes 1,200 units for the Willowgrove Project, consistent with the original proposal at the time West Yost completed the collection system capacity analysis. Subsequently, West Yost reviewed the WWTP Capacity Memorandum to determine if the increase to 1,250 units would change the findings. According to West Yost, the addition of 50 units would increase the average WWTP flow by less than 8,000 gallons per day (Personal communication [email] between Kathryn Gies, Engineering Manager, West Yost, and Stan Gryczko, Public Works U&O Director, City of Davis, April 3, 2025).

Table 4.14-6
Modeled Wastewater Flows

System ID			Existing Pipe Diameter (inches)	Modeled PWWF (mgd)	d/D Results
Gravity Main	Upstream Node	Downstream Node		Buildout[1]	Buildout
O14-004.1	O14-004	N14-004	42	8.05	0.41
N14-004.1	N14-004	N14-003	42	8.05	0.41
N14-003.1	N14-003	N14-002	42	8.05	0.41
N14-002.1	N14-002	N14-001	42	8.04	0.41
N14-001.1	N14-001	M14-004	42	8.04	0.48
M14-004.1	M14-004	M14-003	42	8.02	0.66
M14-003.1	M14-003	M14-002	42	8.48	0.66
M14-002.1	M14-002	M14-001	42	8.46	0.60
M14-001.1	M14-001	L14-001	42	8.45	0.55
L14-001.1	L14-001	L14-002	42	8.45	0.54
L14-002.1	L14-002	L14-003	42	8.45	0.52
L14-003.1	L14-003	L14-004	42	8.45	0.45
L14-004.1	L14-004	M15-001	42	8.45	0.43
M15-001.1	M15-001	M15-002	42	8.44	0.61
M15-002.1	M15-002	M15-003	42	8.44	0.61
M15-003.1	M15-003	M15-004	42	8.43	0.48
M15-004.1	M15-004	M15-005	42	8.43	0.48
M15-005.1	M15-005	M15-006	42	8.42	0.48
M15-006.1	M15-006	M16-001	42	8.41	0.49
M16-001.1	M16-001	M16-006	42	8.41	0.50
M16-006.1	M16-006	M16-002	42	9.23	0.50
M16-002.1	M16-002	M16-003	42	9.23	0.50
M16-003.1	M16-003	M16-004	42	9.22	0.50
M16-004.1	M16-004	M16-005	42	9.21	0.49
M16-005.1	M16-005	M17-001	42	9.21	0.48
M17-001.1	M17-001	M17-002	42	9.20	0.48
M17-002.1	M17-002	M17-003	42	9.20	0.48
M17-003.1	M17-003	M17-004	42	9.19	0.49
M17-004.1	M17-004	M17-005	42	9.18	0.50
M17-005.1	M17-005	M18-012	42	9.18	0.52
M18-012.1	M18-012	M18-006A	42	9.17	0.52
M18-006A.1	M18-006A	M18-006	42	10.44	0.52
M18-006.1	M18-006	M18-007	42	10.44	0.51
M18-007.1	M18-007	M18-008	42	10.43	0.51
M18-008.1	M18-008	M18-009	42	10.43	0.51
M18-009.1	M18-009	M18-010	42	10.43	0.51
M18-010.1	M18-010	M18-011	42	10.42	0.51
M18-011.1	M18-011	M19-001	42	10.42	0.49
M19-001.1	M19-001	M19-002	42	10.41	0.49
M19-002.1	M19-002	M19-003	42	10.41	0.50
M19-003.1	M19-003	M19-004	42	10.41	0.50
M19-004.1	M19-004	M19-005	42	10.40	0.51
M19-005.1	M19-005	M20-001	42	10.40	0.52
M20-001.1	M20-001	M20-002	42	10.40	0.52
M20-002.1	M20-002	M20-003	42	10.61	0.51
M20-003.1	M20-003	M20-004	42	10.61	0.50
M20-004.1	M20-004	M20-005	42	10.61	0.50
M20-005.1	M20-005	M20-006	42	10.61	0.46
M20-006.1	M20-006	M20-007	42	10.60	0.45
M20-007.1	M20-007	L21-001	42	11.68	0.59
L21-001.1	L21-001	L21-002	42	11.67	0.61
L21-002.1	L21-002	L21-003	42	11.66	0.63
L21-003.1	L21-003	L21-004	42	11.66	0.67
L21-004.1	L21-004	L21-005	42	11.65	0.67
L21-005.1	L21-005	L21-006	42	11.65	0.56
L21-006.1	L21-006	L21-007	42	11.64	0.56
L21-007.1	L21-007	L21-008	42	11.63	0.56
L21-008.1	L21-008	L21-009	42	11.63	0.56
L21-009.1	L21-009	L21-010	42	11.62	0.56
L21-010.1	L21-010	K21-001	42	11.62	0.56
K21-001.1	K21-001	K21-002	42	11.61	0.56
K21-002.1	K21-002	K21-003	42	11.61	0.56
K21-003.1	K21-003	K21-004	42	11.60	0.55
K21-004.1	K21-004	K21-005	42	11.60	0.54
K21-005.1	K21-005	J21-WWTP	42	11.60	0.52

Note: gravity mains with d/D ratios of greater than the City's design criteria of 0.6 are highlighted in yellow.

[1] Buildout includes buildout conditions in the City of Davis, which includes flows for the Nishi, Bretton Woods, DISC 2022, Village Farms Davis, and Willowgrove Project. The Buildout estimate assumes 1,200 units for the Willowgrove Project, consistent with the original proposal at the time West Yost completed the collection system capacity analysis. Subsequently, West Yost reviewed the Memorandum to determine if the increase to 1,250 units would change the findings. According to West Yost, the addition of 50 units would increase the peak collection system flow by approximately 20,000 gallons per day. (Personal communication [email] between Kathryn Gies, Engineering Manager, West Yost, and Stan Gryczko, Public Works U&O Director, City of Davis, April 3, 2025).

Source: West Yost, April 23, 2024.

- At 2.4 persons per EDU, the total population is anticipated to be 79,700.

The calculated EDUs, service area populations, and ADWFs for the development scenarios of interest are shown in Table 4.14-5.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.14-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Based on the analysis below, the impact is *less than significant*.

The following discussions evaluate the potential for the proposed water, wastewater, electric power, and telecommunication improvements to result in significant environmental effects.

Water Conveyance Infrastructure

Upon annexation of the project site into the City Limits, water service would be provided to the proposed project by the City of Davis. In the immediate project vicinity, East Covell Boulevard contains an existing 12-inch line. As shown in Figure 3-14 in Chapter 3, Project Description, of this EIR and reproduced herein as Figure 4.14-2, From the existing water line in East Covell Boulevard, new eight- and 12-inch water lines would be installed and extended into the project site within the new on-site internal streets. From the new water lines, water service would be provided to each structure through new water laterals.

All new water infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

Installation of the new water supply infrastructure, including new fire water lines and hydrants, would occur either in existing road right-of-way (ROW) or in areas proposed for disturbance as part of development of the proposed project. All potential physical environmental impacts that could result from development of the proposed project, including the new water distribution infrastructure, have been evaluated throughout the technical chapters of this EIR.

Based on the above, the proposed project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects.

Figure 4.14-2
Proposed Water Infrastructure

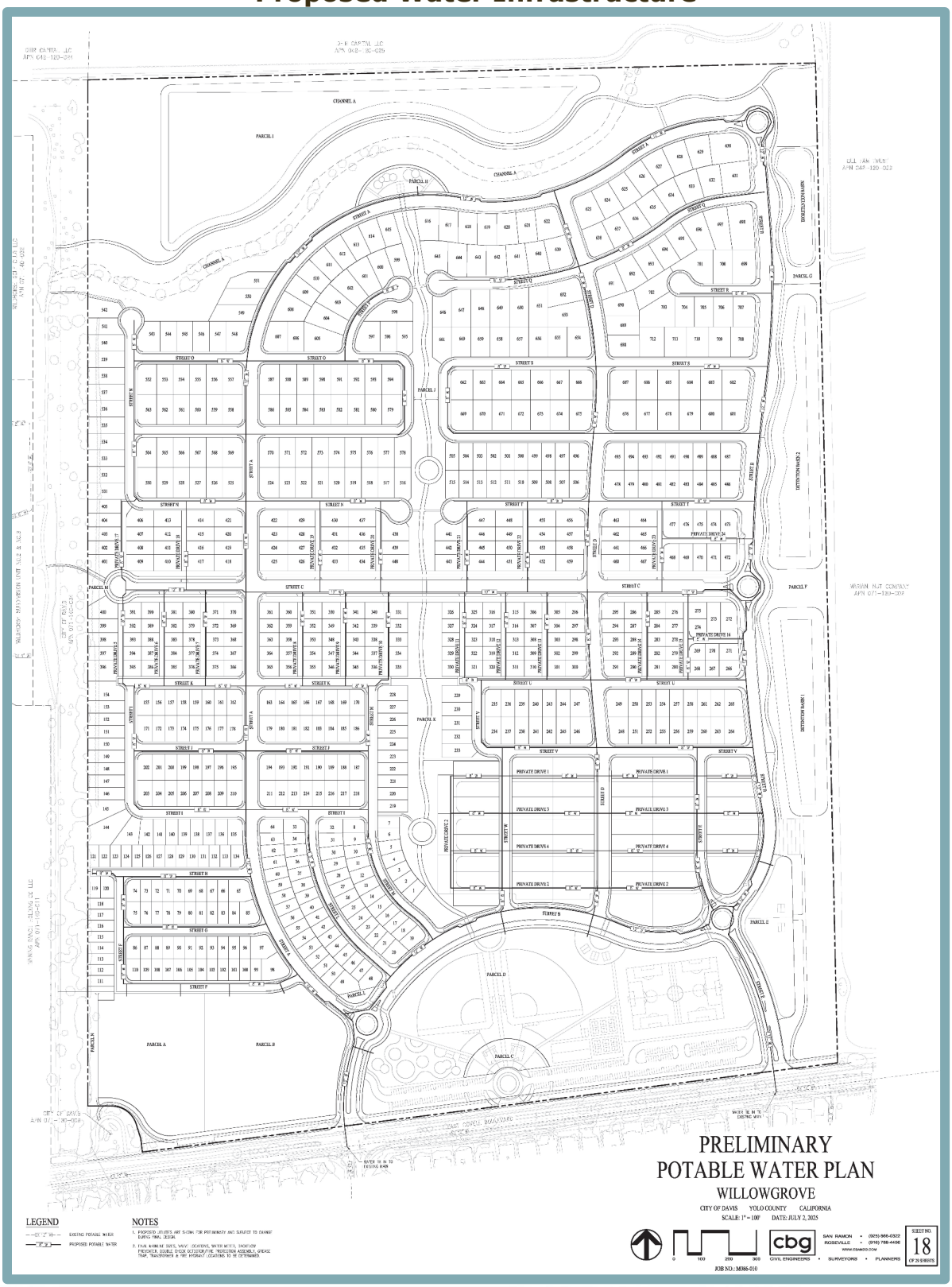


*Figure not OCR compatible.

Wastewater Infrastructure

Upon annexation of the project site into the City Limits, wastewater conveyance service would be provided to the proposed project by the City of Davis. Within the project site vicinity, the existing sewer collection system includes a 42-inch sewer line along the northern boundary of the project site and a 24-inch sewer line along, and just outside of, the eastern boundary of the project site.

As shown in Figure 3-15 in Chapter 3, Project Description, of this EIR and reproduced herein as Figure 4.14-3, new eight- and 12-inch sewer lines would be installed and extended from the existing sewer mains into the project site from the eastern boundary within the new on-site internal streets. From the new sewer lines, sewer conveyance services would be provided to each structure through new sewer laterals. All new sewer infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

All potential physical environmental impacts that could result from development of the proposed project, including new sewer infrastructure, have been evaluated throughout the technical chapters of this EIR. The new sewer infrastructure would be designed and constructed in accordance with the applicable standards set forth in the City of Davis Public Works Design Standards, ensuring the new sewer lines are constructed in conformance with proper materials and sizing.

The modeled buildout PWWF values and d/D results for buildout conditions are shown in Table 4.14-6 for each of the gravity mains between East Covell Boulevard and the WWTP. The City's design criteria allows for a maximum d/D ratio of 0.6. The gravity mains with d/D ratios of greater than 0.6 are highlighted to identify an exceedance of the City's design criteria. As shown in Table 4.14-6, several gravity main segments exceed the criteria under buildout conditions. However, the Wastewater Collection Memorandum found that the d/D ratios at the identified sewer main segments do not warrant system improvements. Thus, the Wastewater Collection Memorandum concluded wastewater flows at buildout could be accommodated by the existing conveyance system.

Based on the above, the proposed project would not require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects.

Electricity and Telecommunications Infrastructure

The proposed project would connect to existing electricity and telecommunications infrastructure located in the project vicinity. It should be noted that the proposed residences would be all-electric and, thus, would not connect to existing natural gas infrastructure. Given that the project site is adjacent to existing development to the west and south, the proposed project would not require major infrastructure improvements related to existing electrical and telecommunications utilities beyond the necessary infrastructure to connect to existing systems.

Figure 4.14-3
Proposed Sewer Infrastructure

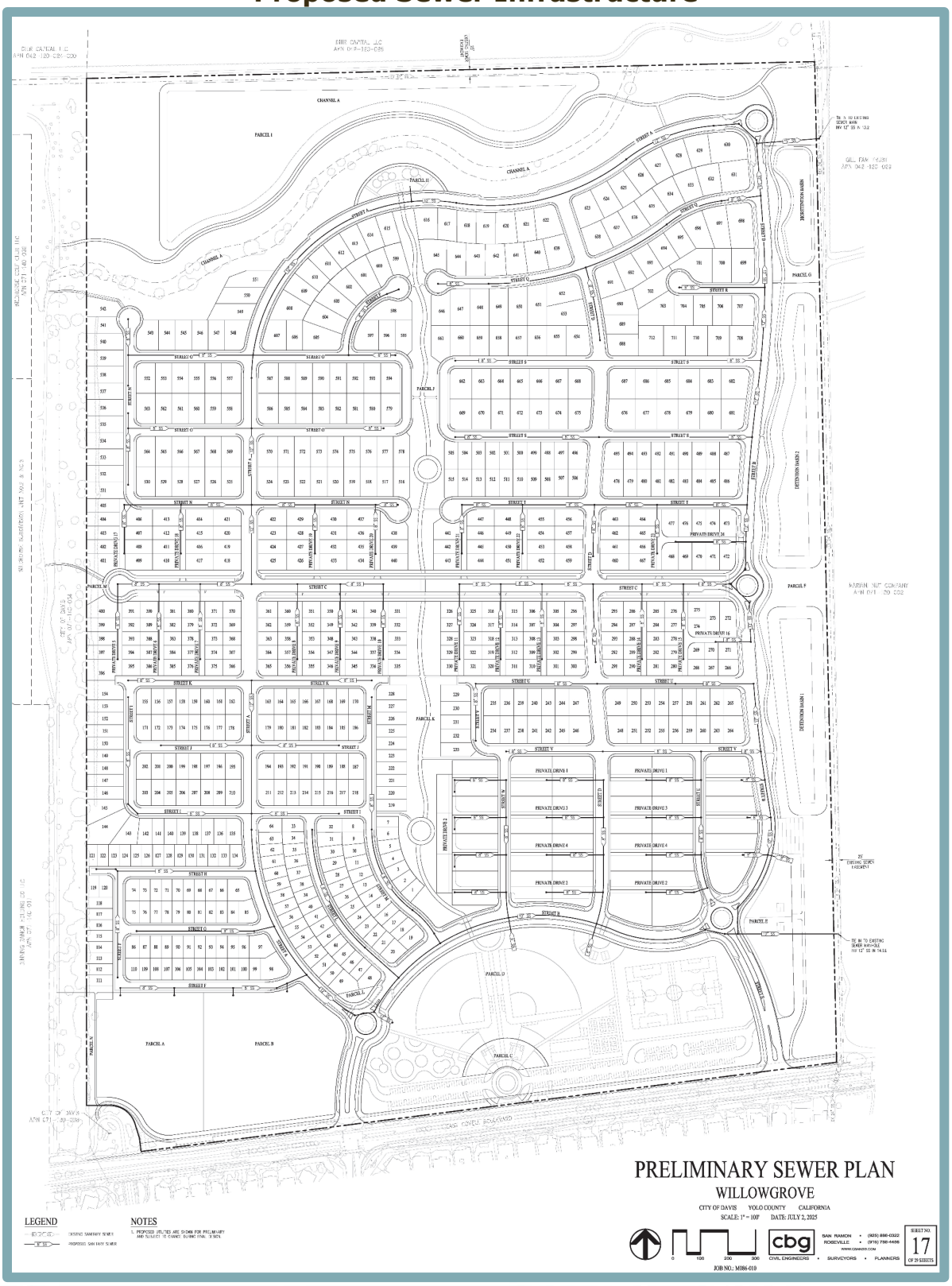


*Figure not OCR compatible.

The new connections to existing electricity and telecommunications infrastructure would be installed consistent with Davis Municipal Code Article 38.01, ensuring that the new infrastructure is installed underground in accordance with established construction standards, as well as with the rules and regulations authorized by the State Public Utilities Commission.

Based on the above, development of the proposed project would not require or result in the relocation or construction of new or expanded electricity and telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Conclusion

Based on the above, development of the proposed project would not require or result in the relocation or construction of new or expanded water, wastewater, electricity, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. Therefore, a ***less-than-significant*** impact could occur.

Mitigation Measure(s)

None required.

4.14-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, single dry, and multiple dry years. Based on the analysis below, the impact is *less than significant*.

As part of the WSA and as summarized in Table 4.14-7, the total projected water supplies and demand during normal, single dry, and multiple dry years from 2025 to 2045 was calculated for the City of Davis, including demands associated with the proposed project.

As shown in Table 4.14-7, the City's projected available water supply would meet the anticipated demand for water generated by the proposed project and the City's existing commitments, as well as reasonably foreseeable cumulative development, during normal, single dry, and multiple dry years.

Based on the above, the City would have sufficient water supplies available to serve buildout of the proposed project, as well as reasonably foreseeable future development, during normal, single dry, and multiple dry years, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Table 4.14-7
City of Davis Plus Proposed Project Water Demand and Supply – Normal, Single Dry, and Multiple Dry Years (AFY)

		2025	2030	2035	2040	2045
Normal Year						
Total Demand		9,790	11,439	12,091	12,081	12,081
Total Supply		23,320	23,320	23,320	23,320	23,320
Supply Minus Demand		**13,530**	**11,881**	**11,229**	**11,239**	**11,239**
Single Dry Year						
Total Demand		9,790	11,439	12,091	12,081	12,081
Total Supply		15,260	15,260	15,260	15,260	15,260
Supply Minus Demand		**5,470**	**3,821**	**3,169**	**3,179**	**3,179**
Multiple Dry Years						
First Year	Total Demand	9,790	11,439	12,091	12,081	12,081
	Total Supply	15,260	15,260	15,260	15,260	15,260
	Supply Minus Demand	**5,470**	**3,821**	**3,169**	**3,179**	**3,179**
Second Year	Total Demand	9,790	11,439	12,091	12,081	12,081
	Total Supply	15,260	15,260	15,260	15,260	15,260
	Supply Minus Demand	**5,470**	**3,821**	**3,169**	**3,179**	**3,179**
Third Year	Total Demand	9,790	11,439	12,091	12,081	12,081
	Total Supply	15,260	15,260	15,260	15,260	15,260
	Supply Minus Demand	**5,470**	**3,821**	**3,169**	**3,179**	**3,179**
Fourth Year	Total Demand	9,790	11,439	12,091	12,081	12,081
	Total Supply	15,260	15,260	15,260	15,260	15,260
	Supply Minus Demand	**5,470**	**3,821**	**3,169**	**3,179**	**3,179**
Fifth Year	Total Demand	9,790	11,439	12,091	12,081	12,081
	Total Supply	15,260	15,260	15,260	15,260	15,260
	Supply Minus Demand	**5,470**	**3,821**	**3,169**	**3,179**	**3,179**

Source: Brown and Caldwell, December 2024.

4.14-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Based on the analysis below, even with implementation of mitigation, the impact is *considered significant and unavoidable*.

The WWTP Capacity Memorandum (Appendix S to the Draft EIR) concluded that the City of Davis WWTP had an influent ADWF design target at or above 5.3 mgd available capacity, with the exception of the anaerobic digesters. The WWTP's anaerobic digesters were determined to have a slightly lower ADWF of 5.1 mgd. According to the WWTP Capacity Memorandum, City WWTP operations staff had raised concerns that the existing influent WWTP flows and loads may be approaching the capacity of the secondary treatment system. In July 2024, staff engaged consultants Brown & Caldwell to study the City's WWTP, evaluate the operational challenges experienced by the team, assess the overall constituent loads and capacity at the plant, and provide options for the City to consider to address these findings. Brown & Caldwell has recently completed preliminary assessment of the WWTP capacity and tentatively confirmed that the WWTP may be at or nearing capacity for secondary treatment (see Appendix U to the Draft EIR). As shown in Table 4.14-5, the maximum influent ADWF from the proposed project is estimated to be approximately 0.2 mgd. Based on these preliminary results, it appears probable that adequate capacity may not exist to accommodate the proposed project's wastewater.

Based on the above, the proposed project could result in a determination by the wastewater treatment provider that adequate capacity to serve the project's projected demand in addition to the provider's existing commitments does not exist. Thus, a ***significant*** impact could occur.

Mitigation Measure(s)

The City is currently working with Brown & Caldwell to identify the range of engineering options available to provide additional treatment capacity at the WWTP. The costs for the necessary upgrades to the WWTP will also need to be identified, and likely, included in the City's Capital Improvement Program. Implementation of the following mitigation measure would require the applicant to pay its fair share towards future expansion of the WWTP, but because the costs for the necessary upgrades are not yet included in the City's CIP, the remaining funds necessary to guarantee completion of the upgrades are uncertain. As a result, the project's impact is considered *significant and unavoidable*.

4.14-3 Prior to issuance of any building permits, the project applicant shall pay the City's Wastewater Capacity Charges in effect at time of issuance.

4.14-4 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, or

conflict with federal, State, and local management and reduction statutes and regulations related to solid waste. Based on the analysis below, the impact is *less than significant*.

Solid waste services (collection and recycling) are provided to the City of Davis by Recology Davis. All non-recyclable wastes collected from the City are disposed of at the 770-acre Yolo County Central Landfill in the northeast portion of the Davis planning area. According to CalRecycle, the Yolo County Central Landfill has a remaining capacity of 33,140,373 CY (or 68 percent remaining capacity) and has a current anticipated closure date of 2124.[15]

According to the U.S. Environmental Protection Agency (USEPA) report, Estimating 2003 Building-Related Construction and Demolition Materials Amounts, residential construction activities generate an average of 4.39 pounds per square foot (lbs/sf) of waste.[16] The proposed project would include construction of 1,250 new residences; however, the total building square footage of the future units is currently unknown. Therefore, for analysis purposes, each unit was conservatively estimated to include 2,500 sf of building space. The construction of 1,250 new residences could result in a total estimated buildout square footage of 3,125,000 sf, the construction of which would produce approximately 13,718,750 pounds (6,859 tons) of construction waste (4.39 lbs/sf x 3,125,000 sf). Construction of the proposed limited non-residential uses would generate a minimal amount of additional construction waste.

The CALGreen Code requires at least 65 percent diversion of construction waste for projects permitted after January 1, 2017. As such, a minimum of 4,459 tons of waste would be diverted away from landfill disposal during construction. Considering the applicable CALGreen Code requirements, buildout of the proposed project would be anticipated to produce up to 2,400 tons of waste during construction, using conservative assumptions. Construction waste generation represents a short-term increase in waste generation. Considering that the Yolo County Central Landfill has a remaining capacity of 68 percent of the total permitted capacity of the landfill, the construction waste would represent only an incremental contribution to the waste received at the landfill, and a less-than-significant impact would occur.

Operational solid waste generation from the proposed project has been estimated based on an average waste generation rate for households and institutional square footage, as published by CalRecycle.[17] The proposed 1,250 residences would produce approximately 15,288 lbs/day (7.64 tons/day) (1,250 x 12.23 lbs/household/day) of operational solid waste. The total non-residential square footage would produce a relatively limited amount of additional solid waste per day. The Yolo County Central Landfill has a permitted throughput of 3,000 tons/day and, thus, would

[15] California Department of Resources Recycling and Recovery. *SWIS Facility/Site Activity Details Yolo County Central Landfill (57-AA-0001)*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/689?siteID=4033. Accessed July 2025.

[16] U.S. Environmental Protection Agency. *Estimating 2003 Building-Related Construction and Demolition Materials Amounts.* 2009.

[17] California Department of Resources Recycling and Recovery. *Estimated Solid Waste Generation Rates*. Available at: https://www2.calrecycle.ca.gov/wastecharacterization/general/rates. Accessed July 2025.

be able to accommodate the operational waste generated by the proposed project. In addition, considering that the Yolo County Central Landfill has a remaining capacity of 68 percent, the operational waste associated with the proposed project would represent only an incremental contribution to the waste received at the landfill.

Based on the above, 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. In addition, neither development scenario would conflict with applicable federal, State, and local management and reduction statutes and regulations related to solid waste. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The cumulative setting for impacts related to public services and recreation encompasses buildout of the proposed project in conjunction with the development of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.14-5 Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City of Davis General Plan. Based on the analysis below, the cumulative impact, specifically related to WWTP capacity, is *significant, and the project's incremental contribution could be cumulatively considerable*.

The cumulative analysis in this EIR is based upon development of the proposed project, in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. In addition to the proposed project, Village Farms Davis, a 497-acre subdivision project located northwest of the East Covell Boulevard/Pole Line Road intersection, is currently under review by the City. Just west of the Willowgrove site, north of the East Covell Boulevard/Monarch Lane intersection, is the approved/under construction Palomino Place Project, which is on a 25-acre site and would include single- and multi-family housing, as well as health and training facilities open to the public. Other development projects undergoing planning review are located in the southern portion of the City, including two new multi-family residential apartment buildings, a new commercial hotel building, and a 700-unit residential neighborhood located on the 46.9-acre site formerly known as the Nishi Housing Site. The Bretton Woods project, a senior residential community located

northwest of the West Covell Boulevard/Risling Place intersection, is currently under construction. Finally, the City of Davis previously approved the Davis Innovation and Sustainability Campus (DiSC) 2022 Project, which was proposed for a 102-acre site (plus the 16.5-acre Mace Triangle property) located immediately to the east of Mace Boulevard and to the north of CR 32A, northeast of the City Limits before being denied by voters.

The following discussions provide an analysis of the contribution of the proposed project to cumulative impacts associated with water supply, wastewater treatment, dry utilities, and solid waste within the City of Davis under cumulative conditions.

Water Supply

Cumulative development, in conjunction with the proposed project, would result in increased demand for water supplies provided by the City. According to the Citywide WSA, the total projected water supply in a normal year would be 23,320 AFY and would be 15,260 AFY in single and multiple dry years from 2025 through 2045. Based on the demand in AFY presented in Table 4.14-5, the City is anticipated to have a surplus of water supplies in all water year types to accommodate buildout of the City's General Plan planning area and present and future probable projects, including the proposed project.

In addition, new water infrastructure required as part of cumulative development within the City would be required to be designed and constructed in compliance with the applicable standards set forth in the City of Davis Public Works Design Standards. Each development project, including the subject project, is required to pay City water connection fees, which constitute its fair share towards any needed water supply infrastructure upgrades. Compliance with the foregoing standards would ensure new water lines installed as part of buildout of the City of Davis are constructed in conformance with proper materials and sizing.

Based on the above, adequate water supply would be available to serve cumulative development within the City, in conjunction with the proposed project, and a less-than-significant impact would occur.

Wastewater Treatment

With respect to wastewater, according to the WWTP Capacity Memorandum, cumulative development would result in increased demand for wastewater treatment services, with the ADWF flows under cumulative buildout conditions projected to be 4.9 mgd. The WWTP Capacity Memorandum also concluded that based on a 2022 capacity analysis prepared by West Yost, the City's WWTP facilities have available capacity at or above a 5.3 mgd influent ADWF design target, with the exception of the facility's anaerobic digesters, which have a firm capacity at a slightly lower ADWF of 5.1 mgd. While, the WWTP Capacity Memorandum concluded that the City's WWTP facilities would have sufficient capacity to support flows and loads associated with cumulative buildout of the City, more recent testing by Brown & Caldwell has provided preliminary evidence that the WWTP is likely at or nearing capacity for secondary treatment. As a result, the proposed project in combination with reasonably foreseeable development could result in a significant impact related to WWTP

capacity, and the project's incremental contribution could be cumulatively considerable.

In addition, based on the results of the Wastewater Collection Memorandum for cumulative buildout conditions, the City identified six gravity sewer main segments where flows would exceed the applicable d/D ratio (see Table 4.14-6). However, the Wastewater Collection Memorandum concluded that the impacts to the gravity mains under the cumulative development scenario would be very slight and improvements to the City's wastewater conveyance system are not currently recommended, as sewer flows could be accommodated by the existing conveyance system.

Based on the above, adequate wastewater treatment services would not be available to serve cumulative development within the City of Davis, in conjunction with the proposed project.

Electricity and Telecommunications Facilities

Environmental effects associated with the construction of new or expanded electricity and telecommunications facilities would primarily be project-specific, rather than cumulative. As noted under Impact 4.14-1, while development of the proposed project would include new connections to existing infrastructure located in the project site vicinity, substantial extension of existing off-site electrical or telecommunications infrastructure would not be required. Therefore, the Proposed Project would result in a less-than-significant cumulative impact related to construction of new or expanded electricity and telecommunications facilities.

Solid Waste

As previously discussed, according to CalRecycle, the Yolo County Central Landfill is anticipated to cease operations by 2124. Construction waste generated by development facilitated by buildout of the General Plan planning area would be required to comply with the applicable provisions of the CALGreen Code, which requires at least 65 percent diversion of construction waste for projects permitted after January 1, 2017. In addition, the Yolo County Central Landfill has a remaining capacity of 33,140,373 CY, or 68 percent of the total capacity. Considering the remaining capacity at the landfill to serve future development, adequate capacity would be available to serve cumulative development within the City, in conjunction with the proposed project, and a less-than-significant cumulative impact would occur.

Conclusion

Based on the above, adequate water supply, wastewater collection capacity, electricity, telecommunication facilities, and landfill capacity would be available to serve cumulative development in conjunction with development of the proposed project. However, the proposed project in combination with reasonably foreseeable development could have a significant cumulative impact to the City's WWTP capacity, and the project's incremental contribution could be ***cumulatively considerable***.

Mitigation Measure(s)

As previously discussed, the City is currently working with Brown & Caldwell to identify the range of engineering options available to provide additional treatment capacity at the WWTP. The costs for the necessary upgrades to the WWTP will also need to be

identified, and likely, included in the City's Capital Improvement Program. Implementation of the following mitigation measure would require the applicant to pay its fair share towards future expansion of the WWTP, and other reasonably foreseeable cumulative projects would be required to pay Wastewater Capacity Charges. However, the costs for the necessary upgrades are not yet included in the City's CIP, and thus, the remaining funds necessary to guarantee completion of the upgrades are uncertain. As a result, the project's incremental contribution is considered *significant and unavoidable*.

4.14-5 Implement Mitigation Measure 4.14-3.

4.15. Wildfire

4.15 WILDFIRE

4.15.1 INTRODUCTION

The Wildfire chapter of the EIR summarizes the existing wildfire setting information and identifies wildfire potential within the project area. The chapter describes the fire types that occur in the project region, the fire history of the project region, the fuel treatment projects, such as mechanical thinning and prescribed fire, within the region, and consideration of site-specific factors that may affect wildfire potential at the project site. The information contained in the analysis is primarily based on publicly available information provided by the California Department of Forestry and Fire Protection (CAL FIRE), the California Public Utilities Commission (CPUC), the Davis Fire Department, the City of Davis General Plan,[1] the City's General Plan EIR,[2] and the Yolo County 2030 Countywide General Plan.[3]

4.15.2 EXISTING ENVIRONMENTAL SETTING

The following section describes the existing wildfire setting in the project region, including the existing fire types, wildland fire hazards, public safety power shutoffs, fire protection agencies and resources in the project region, and emergency vehicle access.

Fire Types

Yolo County is at risk of experiencing three fire types: wildfires, wildland-urban interface (WUI) fires, and structural fires. The three fire types are described in further detail below.

Wildfires

Wildfires occur on mountains, hillsides, and grasslands. Vegetation, wind, temperature, humidity, and slope are all factors that affect how wildfire spreads. Yolo County is considered a rural/suburban County. Wildland fire danger varies throughout the County, as the County is characterized by relatively level valley floor landscapes in the southern and eastern portions of the County, where the City of Davis is located. Such lack of topography and complex fuels leads to very little severe fire behavior. However, the climate of the Yolo County region, which often includes seasonal drought conditions, can keep vegetation dry, which can make the region's vegetation more readily combustible during fire season. In the City of Davis, to which the project site is currently adjacent, the wildland fire hazard season lasts from early spring through late fall. Agricultural land surrounding the City provides limited fuel when crops are present that could allow wildfires to spread across large tracts of land; although, irrigation practices and fallow agricultural land limit the potential of wildfire spread. In the increasingly hilly landscapes that rise in the northern and western portions of the County, the rugged topography creates a landscape where fires can spread rapidly upslope and access for suppression equipment is limited.

1 City of Davis. *City of Davis General Plan*. Adopted May 2001, Amended January 2007.
2 City of Davis. *Final Program EIR for the City of Davis General Plan Update and Final Project EIR for Establishment of a New Junior High School*. Certified May 2001.
3 Yolo County. *2030 Countywide General Plan*. Adopted November 2009.

Wildland-Urban Interface Fires

The WUI zone is an area where buildings and infrastructure (e.g., cell towers, schools, water supply facilities) mix with areas of wildland vegetation susceptible to ignition due to several factors, including topographical features, vegetation fuel types, local weather conditions, and prevailing winds. The interface is sometimes divided into the defense zone (areas near communities, usually about 0.25-mile wide) and threat zones (an approximately 1.25-mile buffer around the defense zone). In the WUI zone, efforts to prevent ignitions and limit wildfire losses hinge on hardening structures and creating defensible space through a multi-faceted approach, including engineering, enforcement, education, emergency response, and economic incentive. Different strategies in the defense and threat zones of the WUI help to limit the spread of fire and reduce risks to people and property.

The Yolo County Community Wildfire Protection Plan (CWPP)[4] defines the WUI zone as any populated area that falls within a high-severity fire hazard area, as mapped by the 2021 Yolo County Quantitative Wildfire Risk Assessment (QWRA).[5] The results of the County's QWRA show that many of the threats from wildfire, including those within the WUI zone, occur in the western portion of the County, which borders Napa and Solano counties along the Blue Ridge Mountain ridges and slopes. Pockets of moderate-to-high threat in the County's interior include areas east of Capay Valley, west of and surrounding the City of Winters, and along the Dunnigan Hills west of Interstate 5 (I-5). As shown in Figure 4.15-1, the City of Davis is not located in a high-severity fire hazard area, as mapped by CAL FIRE, and, thus, is not within the WUI zone, as defined by the Yolo County CWPP.

Structural Fires

Urban fires occur in developed environments, destroying buildings and other human-made structures. Structural fires are often caused by faulty wiring, mechanical equipment, or combustible construction materials and can proliferate due to the absence of fire alarms and sprinkler systems. Structural fires have been due largely to human accidents, although deliberate fires (arson) may be a cause of some events. Older buildings that lack modern fire safety features may face greater risk of damage from fires. To minimize fire damage and loss, the City's Fire Code (Davis Municipal Code Chapter 13) incorporates the California Fire Code (CFC) and sets standards for building and construction. The City's Fire Code requires the provision of adequate water supply for firefighting, automatic fire sprinkler systems, fire-retardant construction, and minimum street widths, among other things.

Wildland Fire Hazards

The following sections include discussions on wildfire classifications; the effects of topography, vegetation, and prevailing winds on wildfire, and the large fire history of Yolo County.

Wildland Fire Classifications

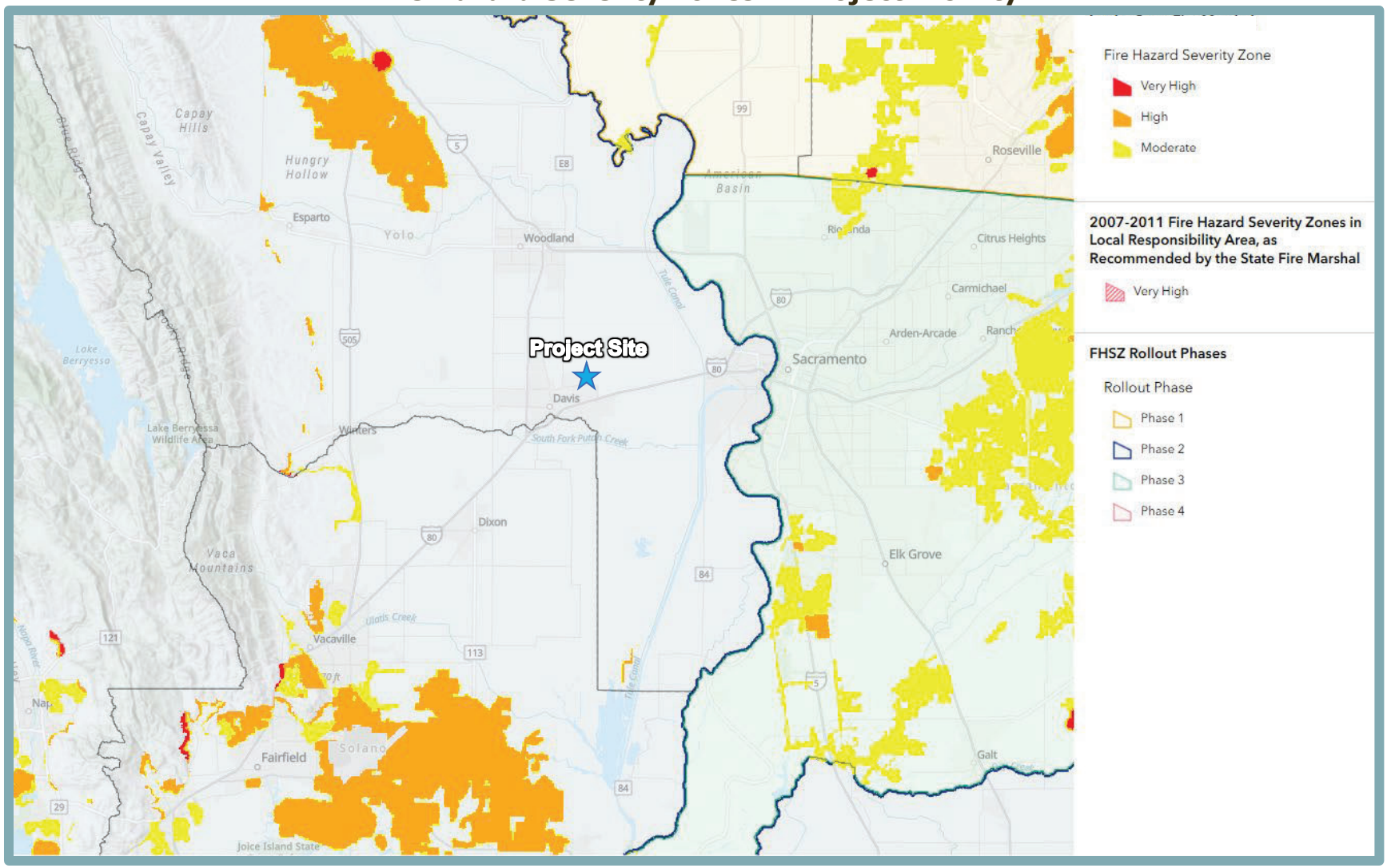
With respect to wildland fires, previous significant WUI fires within the State have precipitated the passage of statutes necessitating the classification of wildland fire hazard areas, according to a location's potential for causing ignitions to buildings.

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4 It should be noted that the Yolo County CWPP is not a regulatory document. Rather, the Yolo County CWPP provides wildfire hazard and risk assessments, community descriptions, and options for addressing issues of vulnerability to wildfire, all while outlining a priority list of projects that can efficiently reduce risk of property damage, environmental harm, and loss of life.

5 Yolo County Resource Conservation District. *Yolo County Community Wildfire Protection Plan*. March 2023.

Figure 4.15-1
Fire Hazard Severity Zones in Project Vicinity



Source: CAL FIRE, Fire Hazard Severity Zone Viewer, 2025.

Such classifications are referred to as Fire Hazard Severity Zones (FHSZs) and provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential of buildings in the WUI zones.

Pursuant to Government Code Section 51178, Very High FHSZs are determined by the Director of Forestry and Fire Protection, based on consistent statewide criteria and the severity of fire hazard that is expected to prevail in such areas. Very High FHSZs are based on fuel loading, slope, fire weather, and other relevant factors, including areas where Santa Ana, Mono, and Diablo winds have been identified by CAL FIRE as a major cause of wildfire spread. Public Resources Code (PRC) Sections 4201 through 4204 direct CAL FIRE to map fire hazards within State Responsibility Areas (SRAs), based on relevant factors such as fuels, terrain, and weather. SRAs are recognized by the Board of Forestry and Fire Protection as areas where CAL FIRE is the primary emergency response agency responsible for fire suppression and prevention.

The project site is not located within an SRA but, rather, is located within a Local Responsibility Area (LRA). As shown in Figure 4.15-1, the project site is identified by CAL FIRE as being within a Non-Very High FHSZ area. Additionally, as previously discussed, the project site is not located within a WUI zone, as defined by the Yolo County CWPP.

Topography and Vegetation

Topography, which includes slope and aspect, can play a significant role in wildfire risk. Fires burn faster uphill than downhill, due to fuels above a fire being brought into closer contact with upward moving flames. In addition, the process of heat transfer is influenced by topography, because heat rises (convection) and heat transfer through convection tends to move upward. Furthermore, during wildfires, burning materials on the forest floor also create convection currents that preheat the leaves and branches of shrubs and trees above the fire. Heat transfer, therefore, occurs more rapidly through fuels up a slope, resulting in fire traveling more quickly upslope than downslope.

Vertical air currents can also lift burning materials, as floating embers, known as firebrands, can settle in unburned areas ahead of a fire, starting smaller fires. The phenomenon is called spotting and can result in rapid advancement of a fire.

As previously discussed, the County is characterized by relatively level valley floor landscapes in the southern and eastern portions of the County, where the City of Davis is located. Therefore, the project area does not contain steep or significant slopes, such as those in steep-walled canyons or mountainous valleys. The absence of steep and significant slopes limits wildfire risks related to topography in the project region. With respect to vegetation, much of the area surrounding Davis is used for agriculture, as agriculture is the most significant industry in the region. Irrigation of agricultural land limits dry conditions associated with the region's seasonal droughts and concurrently limits the potential of wildfire spread.

With respect to the topography of the project site, the site consists of generally flat, agricultural land, which substantially limits the existing potential for on-site fire spread. With respect to vegetation, other than the on-site seasonally planted crops, the other primary source of vegetation is the existing trees within the project site, which include trees located along East Covell Boulevard and along the on-site portion of Channel A. The scattered on-site trees provide limited fuel for wildfire.

The project site is bounded by East Covell Boulevard to the south; the 135-foot-wide Wildhorse Agricultural Buffer to the west; and agricultural land to the north and east. Other surrounding uses include single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences and Frances Ellen Watkins Harper Junior High School (Harper Junior High) to the south/southeast, across East Covell Boulevard. The foregoing urban uses in the immediate project vicinity generally limit the existing potential for fire to spread to the project site.

Prevailing Winds

The predominant average hourly wind direction in the City of Davis varies throughout the year. Northerly winds, which could blow from the agricultural land from the north towards the project site, are most dominant from mid-October to late-February when ambient temperatures are milder and, thus, fire risk is lower. In addition, winds also occur from the west for a portion of the year, especially during the summer months.[6] Other than the existing Wildhorse Agricultural Buffer, vegetation that could serve as a fuel source is limited to the west of the project site.

Large Fire History

According to CAL FIRE, relatively few larger wildfires, defined as 10 acres or greater, have occurred within the greater region of the project site over the past three years.[7] The fires listed below occurred primarily to the north and to the west of the City of Davis. CAL FIRE strives to extinguish 95 percent of all wildland fires at 10 acres or less. According to CAL FIRE, larger fires did not occur in Yolo County in 2023, 2024, and 2025 to date.

- In May 2022, the Dunnigan Fire burned 120 acres in Yolo County, along County Road (CR) 11 and CR 86, southwest of Dunnigan, approximately 25.07 miles northwest of the project site. Injuries or fatalities were not reported, and structures were not reported as damaged or destroyed.
- In May 2022, the Quail Fire burned 135 acres in Solano County, along Quail Canyon Road and Pleasants Valley Road, southwest of the City of Winters, approximately 18.95 miles to the southwest of the project site. Injuries or fatalities were not reported, and structures were not reported as damaged or destroyed.
- In June 2022, the Timm Fire burned 26 acres in Solano County, along Buena Vista Lane and Timm Road, north of the City of Vacaville, approximately 17.41 miles southwest of the project site. Injuries or fatalities were not reported, and structures were not reported as damaged or destroyed.

The Davis Fire Department (DFD) also responded to a wildfire in the Grasslands Regional Park area on May 26, 2025, located approximately 4.83 miles south of the project site. According to the DFD, the fire was contained at approximately 200 acres in size due to emergency response from the City, as well as from Solano and Yolo County fire departments. The DFD reports that injuries and/or building loss did not occur.[8]

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6 Weather Spark. *Climate and Average Weather Year Round in Davis*. Available at: https://weatherspark.com/y/1120/Average-Weather-in-Davis-California-United-States-Year-Round. Accessed June 2025.

7 California Department of Forestry and Fire Protection. *Incidents Overview*. Available at: https://www.fire.ca.gov/incidents/. Accessed May 2025.

8 Davis Fire Department. *A wildfire started in the area of the Grasslands Regional Park…* [Facebook post]. Available at: https://www.facebook.com/cityofdavisfire/videos/9902126136512773/. Accessed May 2025.

Additionally, according to the Yolo County CWPP, the LNU Lighting Complex fires occurred from August 17, 2020, to October 2, 2020, and included a large complex of fires that burned in Lake, Napa, Sonoma, Solano, and Yolo counties.[9] Mandatory evacuation orders were issued in Yolo County for the Capay Valley and Golden Bear Estates near the City of Winters. The complex was composed of numerous lightning-sparked fires, most of which were small. While the fires ignited separately from each other, the Hennessey Fire eventually grew to merge with the Gamble, Green, Markley, Spanish, and Morgan fires for a total burn area of 363,220 acres. The fires, which burned in the hills surrounding the cities of Fairfield, Napa, and Vacaville, destroyed 1,491 structures and damaged a further 232 structures. Six people were killed and another five were injured. The LNU Lighting Complex is the sixth-largest wildfire in the recorded history of California.

Public Safety Power Shutoffs

In an effort to prevent fires, the electrical service provider for Yolo County, Pacific Gas & Electric Company (PG&E), initiated public safety power shutoffs (PSPS) in 2019, which may continue in subsequent years until fire risks associated with power lines are decreased. PSPS events involve PG&E turning off electrical service during times when the weather is predicted to have a heightened fire risk from gusty winds and dry conditions. Depending on the fire risks, the power outage events may occur in specific areas or for all PG&E customers across the County.

The CPUC adopted the High Fire-Threat District Map in 2018,[10] which serves to assist in the public's protection from potential fire hazards associated with overhead powerline facilities and nearby aerial communication facilities by delineating fire-threat areas in the State. Fire-threat areas are designated as Tier 1, 2, or 3, with Tier 1 defined as a High Hazard Zone, Tier 2 as an Elevated Hazard Zone, and Tier 3 as an Extreme Hazard Zone. The project site is not located within an area designated as Tier 1, 2, or 3 (see Figure 4.15-2). As such, the project site would not be regularly subject to PSPS events.

Throughout PSPS events, emergency services in Yolo County remain functional with back-up power supplies, but many businesses and agencies are not operational, which can result in inadequate access to medical services and exposure to excessive heat or cold.

Fire Agencies and Resources

Several fire agencies provide fire protection services in the project region, including wildland fire and structural fire response. The project site is currently located in the East Davis Fire Protection District's service area (see Figure 4.15-3). Upon annexation of the project site into the City of Davis, the site would be provided fire protection services by the DFD. Because the project site is located within an LRA, the DFD would also be responsible for providing wildland fire suppression services to the site. According to the City, the DFD serves a 133-square mile area containing a population of over 68,000 people, on a total annual budget of nearly $18 million.[11] The DFD provides pre-hospital emergency medical services; minimizes loss from fires, hazardous materials incidents, natural disasters and other emergency services; and ensures that the community's emergency service resources are effectively and efficiently managed.

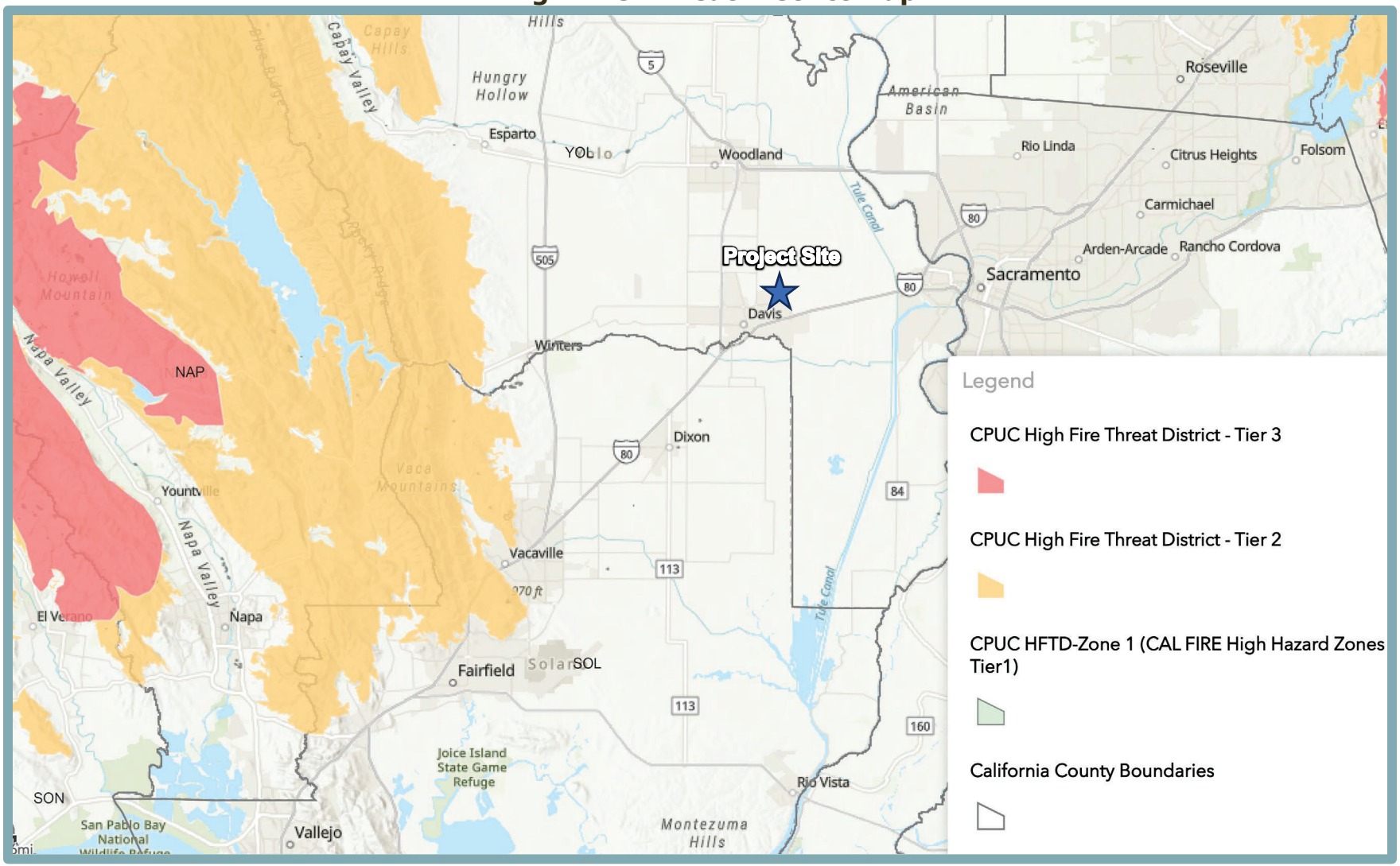
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9 Yolo County Resource Conservation District. *Yolo County Community Wildfire Protection Plan*. March 2023.

10 California Public Utilities Commission. *Fire-Threat Maps and Fire-Safety Regulations Proceedings*. Available at: https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking. Accessed May 2025.

11 City of Davis. *Budget In Brief FY 2024-2025 Adopted Budget.* Available at: https://www.cityofdavis.org/city-hall/finance/city-budget. Accessed May 2025.

Figure 4.15-2
High Fire-Threat District Map



Source: California Public Utilities Commission, CPUC High Fire Threat District (HFTD) Map, 2025.

Figure 4.15-3
East Davis Fire Protection District Boundary Map

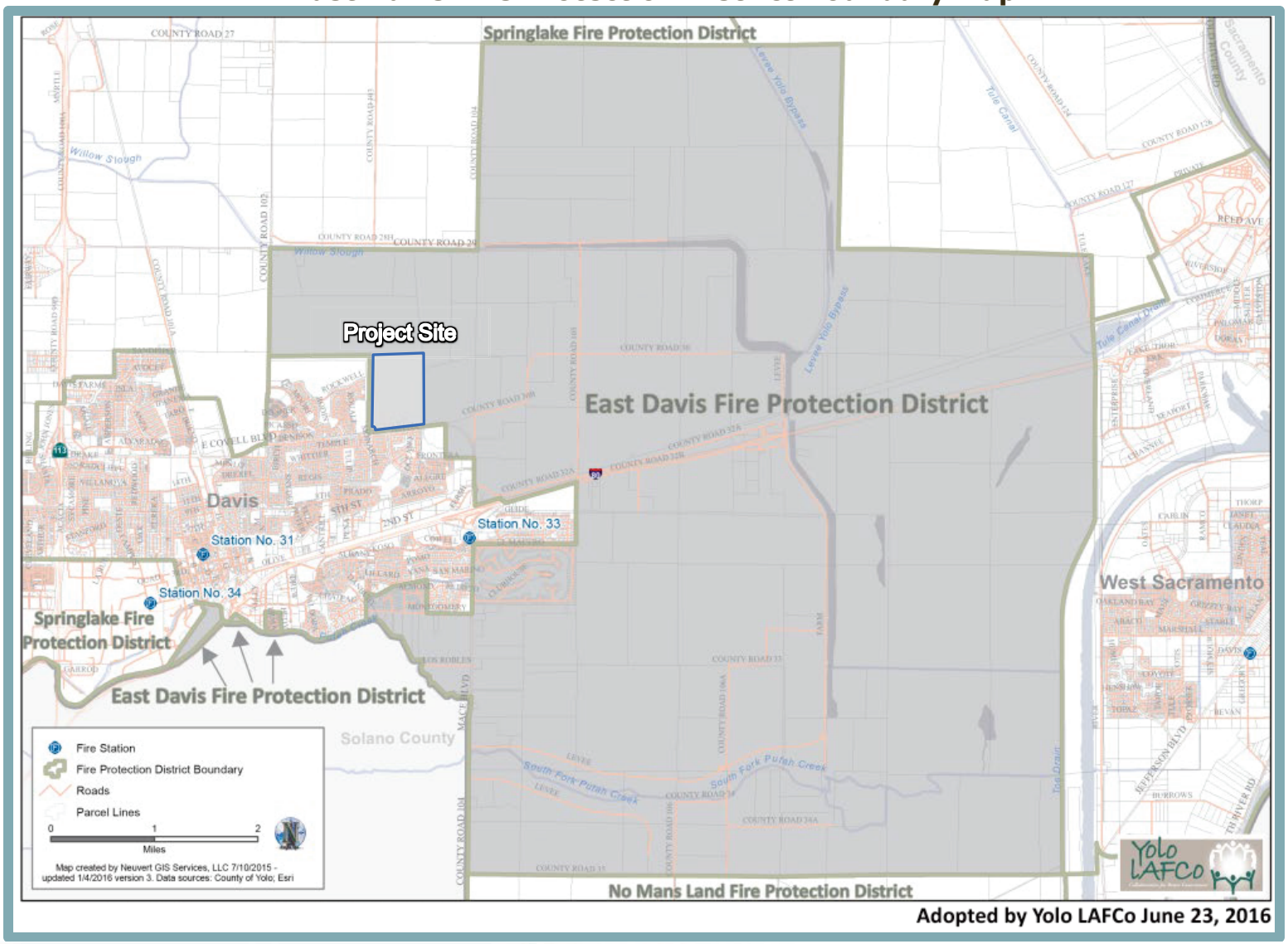


*Figure not OCR compatible.

The DFD maintains a staff of 45 shift personnel (three battalion chiefs, 12 captains, and 30 firefighters), one fire chief, one administrative staff, and one fire marshal, for a total of 48 employees. The DFD equipment consists of three engines, one ladder truck, two squad units, two grass/wildland units, one water tender, three reserve engines, two command vehicles, and three additional staff vehicles, as well as two antique fire apparatus units.

Currently, the required response time goal for the DFD is six minutes for more than 90 percent of all incidents, consistent with the National Fire Protection Association (NFPA) 1710 response time standard.[12] NFPA 1710 Section 4.1.2.1 establishes the following performance objectives: 240 seconds (four minutes) or less travel time for the arrival of the first engine company at a fire suppression incident; and 360 seconds (six minutes) or less travel time for the arrival of the second company with a minimum staffing of four personnel at a fire suppression incident.[13,14] The six-minute response time accounts for a one-minute dispatch processing time, a one-minute turnout time, and a four-minute driving response time. The project site is currently located outside of the four-minute drive time zone (see Figure 4.12-1 in Chapter 4.12, Public Services and Recreation, of this EIR).

The City's three fire stations are located in Central, West, and South Davis. Shift personnel are divided into three 24-hour-per-day shifts, making for a 56-hour work week. The DFD has contractual agreements with the East Davis Fire Protection District, the Springlake Fire Protection District, and the No Man's Land Fire Protection District to provide emergency response to the areas of the foregoing providers. The land covered by the City of Davis and the three foregoing fire protection districts is divided into seven emergency first-response areas. The first-response areas provide clearly defined territories for dispatching the nearest fire and emergency medical service (EMS) personnel and equipment to an emergency. In addition, the DFD has an automatic aid agreement with UC Davis and the cities of Woodland, West Sacramento, and Dixon and a mutual aid agreement with all other fire protection agencies in Yolo County and throughout California.

In the event of a wildfire, Yolo County residents can be contacted through the Alert Yolo system, a component of a partnership between public safety agencies in Yolo, Sacramento, and Placer counties to alert residents about emergency events and other important public safety information through a community notification system. The system enables the Yolo County Office of Emergency Services (OES) to provide the public with critical information quickly in a variety of situations, such as severe weather, unexpected road closures, and evacuations of buildings or neighborhoods. All members of the public can sign up for Alert Yolo through OES' website and elect to receive notifications of emergency situations through various means, including text messages and email.

Emergency Vehicle Access

Fire access can be described as the means by which firefighters can enter an area to quickly mitigate a wildfire incident prior to spread to adjacent properties and critical infrastructure at risk. The proposed project would include an Emergency Vehicle Access (EVA) route in compliance with the Fire Code's Remoteness criteria. The EVA route would provide an additional vehicular

[12] Sandholdt, Patrick, Fire Marshal, Davis Fire Department. *Personal communication [email] with Nick Pappani, Vice President, Raney Planning and Management, Inc. April 10, 2024.*

[13] Sandholdt, Patrick, Fire Marshal, Davis Fire Department. *Personal communication [email] with Nick Pappani, Vice President, Raney Planning and Management, Inc. March 12, 2024.*

[14] *Ibid*.

connection to East Covell Boulevard for emergency vehicles at the southwest corner of the project site between the proposed transit stop and the existing pedestrian undercrossing (see Figure 3-12 of this EIR). Existing roads adjacent to the project site that currently serve as the primary evacuation routes during a wildfire event include East Covell Boulevard, as well as State Route (SR) 113 and Interstate 80 (I-80) in the surrounding area.

4.15.3 REGULATORY CONTEXT

Applicable federal laws or regulations pertaining to wildfire that would directly apply to the proposed project do not exist. The following provides a general overview of the existing State and local regulations that are relevant to the proposed project.

State Regulations

The following are the State environmental laws and policies relevant to wildfire.

State Responsibility Area

Pursuant to PRC Sections 4125 through 4128, the Board of Forestry and Fire Protection classifies all lands in the State for the purposes of determining areas in which the financial responsibility of preventing and suppressing wildfire is primarily the responsibility of the State. The classified lands are termed SRAs.

Fire Hazard Severity Zones

FHSZs are geographical areas designated pursuant to PRC Sections 4201 through 4204 and classified as Very High, High, or Moderate in SRAs or as Very High FHSZs in LRAs pursuant to Government Code Sections 51175 through 51189.

The California Code of Regulations (CCR), Title 14, Section 1280 entitles the maps of the geographical areas as “Maps of the Fire Hazard Severity Zones in the State Responsibility Area of California.”

Local Regulations

The following local goals and policies related to wildfire are applicable to the proposed project.

Yolo County Office of Emergency Services

The Yolo County OES provides emergency management services in cooperation with local cities and special districts, including fire agencies, within the County. During an active incident, such as fire or flood, the OES helps initiate first responses. The functions of OES include emergency planning, response, recovery, and mitigation, including preparation of a Multi-Jurisdictional Hazard Mitigation Plan (HMP), as discussed below.

The OES has created pre-planned evacuation zones throughout Yolo County as part of its “Zonehaven Aware” evacuation management program to help the evacuation process in the event of an emergency. The project site is located within Zone WDL-155. The primary evacuation route for the project site would be East Covell Boulevard.

The 2023 Yolo County Operational Area Multi-Jurisdictional HMP defines measures to reduce risks from natural disasters in the Yolo County planning area, including unincorporated areas, incorporated cities, and special purpose districts. The HMP was prepared in accordance with the requirements of the Disaster Mitigation Act of 2000 to ensure Yolo County is eligible for the Federal Emergency Management Agency’s (FEMA) Pre-Disaster Mitigation and Hazard

Mitigation Grant Programs. The purpose of the HMP is to reduce the risk to life and property in Yolo County by decreasing the long-term vulnerability from hazards, including wildfires, through coordinated planning, partnerships, capacity building, and effective risk reduction measures.

City of Davis General Plan

The following goals and policies from the City of Davis General Plan are applicable to the proposed project.

Police and Fire Chapter

Goal POLFIRE 1 Provide high quality police and fire protection services to all areas of the City.

Policy POLFIRE 1.2 Develop and maintain the capacity to reach all areas of the City with emergency police and fire service within a five-minute emergency response time, 90% of the time. Response time includes alarm processing, turnout time and travel time.

Goal POLFIRE 3 Increase fire safety through provision of adequate fire protection infrastructure, public education and outreach programs.

Policy POLFIRE 3.1 Provide adequate infrastructure to fight fires in Davis.

Policy POLFIRE 3.2 Ensure that all new development includes adequate provisions for fire safety.

Policy POLFIRE 3.3 Make fire protection services visible and accessible to Davis residents.

City of Davis Municipal Code

The following applicable regulations related to wildfire are from the Davis Municipal Code.

Davis Municipal Code Chapter 8: Buildings

Davis Municipal Code Section 8.01.010 adopts by reference the California Building Standards Code (CBSC, Title 24 of the CCR). Section 8.01.040 of the Municipal Code delegates the City's Chief Building Official with the authority to enforce applicable building standards related to fire and panic safety, as well as other regulations of the State Fire Marshal. Both State and local requirements would significantly assist in reducing the threat of a wildfire spreading from undeveloped land to a nearby building.

Davis Municipal Code Chapter 13: Fire Code

Davis Municipal Code Article 13.01 adopts the CFC (Title 24 CCR, Part 9) through Municipal Code Sections 13.01.010 and 13.01.040. The CFC addresses emergency access, access gates, sprinkler systems, fire alarms within buildings, and construction of access roads to accommodate fire apparatus. The CFC requires that an automatic fire sprinkler and/or fire extinguishing system be installed throughout all new residential buildings.

4.15.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed project related to wildfire. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

Consistent with Appendix G of the CEQA Guidelines, Section XX, Wildfire, determination of significant impacts related to wildfire is based on whether a project would result in the following, if located in or near SRAs or lands classified as Very High FHSZs:

- Substantially impair an adopted emergency response plan or emergency evacuation plan;
- 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;
- 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; or
- 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 (see Chapter 5, Effects Not Found to be Significant).

Issues related to whether the proposed project would result in the following impact are discussed in Chapter 5, Effects Not Found to be Significant, of this EIR:

- 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.

Pursuant to CEQA Guidelines Appendix G, the standards of significance listed above are only relevant when a project's location is within an SRA or Very High FHSZ. The project site is not located within land designated as either. Rather, the site is located within an LRA and is identified by CAL FIRE as being within a Non-Very High FHSZ area. Nevertheless, to provide decision-makers and the public adequate information, this chapter evaluates the potential impacts of the proposed project based on the standards listed above.

Potential physical impacts related to the provision of new or physically altered governmental services and/or 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 services are discussed under Impact 4.12-1 within Chapter 4.12, Public Services and Recreation, of this EIR.

Method of Analysis

The impact analysis contained in this chapter is based on a review of available CAL FIRE wildfire hazard mapping and recent wildfire history near the City of Davis and Yolo County. In addition, State and local fire hazard regulations were evaluated to identify applicable design requirements for the proposed project to minimize wildfire risk.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

4.15-1 Substantially impair an adopted emergency response plan or emergency evacuation plan. Based on the analysis below, the impact is *less than significant*.

Emergency events, like wildland fires, are unpredictable. The location of the fire, the time of day an event occurs, the direction of travel, and the rate of spread are unknown. Due to such uncertainty, the use of traditional capacity analysis, such as AM and PM peak hour operations at study intersections, is limited for the analysis of emergency events. Furthermore, the City of Davis, into which the project site would be annexed as part of project approval, does not have an adopted emergency evacuation plan. However, the County's OES has an adopted HMP and the project site is included in the County's Zonehaven Aware evacuation management program. Both the HMP and Zonehaven Aware program outline emergency-response steps local residents can take in response to local hazards, such as wildfires. In the event of an emergency, emergency responders also have measures that can be deployed to aid in the movement of the public from danger. For instance, during evacuation events, State and/or local emergency responders provide active traffic control at intersections, close roads, provide detours for through traffic, and actively manage available travel lanes to facilitate evacuation away from the emergency. Such measures would be initiated in the event that an evacuation is deemed necessary.

The proposed project would include two new vehicular access points along East Covell Boulevard. From East Covell Boulevard, a 60-foot-wide right-of-way (ROW) would be extended into the site in a generally north-to-south direction. In the event of an emergency, multiple evacuation routes would be available. For example, East Covell Boulevard would serve as the primary evacuation routes to SR 113 and I-80, both of which are located within three miles from the project site boundary and would also serve to further assist in evacuating residents from the greater project region.

Furthermore, the DFD has identified the potential need for a 2.0-acre site for a new fire station in the northeastern portion of the City. If the facility is not accommodated elsewhere, the proposed project has reserved land to accommodate the station on the southwestern Residential High Density (HDR) parcel, adjacent to East Covell Boulevard. The fire station would ultimately be designed and implemented by the DFD, but could consist of a four-bay fire station. The fire station would have a dedicated entry and exit onto East Covell Boulevard. As part of Mitigation Measure 4.13-3(b), the project would be required to construct westbound right-turn lanes at the site's two access points on East Covell Boulevard. While Mitigation Measure 4.13-3(b) is required to address cumulative level of service (LOS) impacts and facilitate public transit travel times through the area, the additional lanes would also benefit emergency response services. Emergency vehicles would have improved access to the project site through the added lanes and the roadway would accommodate increased personal vehicles existing the site during an emergency.

As discussed under Impact 4.13-8 within Chapter 4.13, Transportation, of this EIR, the proposed project, in combination with future buildout of the City of Davis, would contribute to extreme delays and queuing are anticipated on westbound East Covell Boulevard at the Alhambra Drive/Westerly Project Access intersection. Project-generated traffic would represent 42 percent of westbound PM peak hour traffic growth on this segment of East Covell Boulevard. Therefore, Mitigation Measure 4.13-8(b) requires the project applicant shall pay its fair share toward the installation of a second westbound through lane along the project's East Covell Boulevard frontage. Such roadway improvements would improve the ability of East Covell Boulevard to accommodate an emergency evacuation response under cumulative conditions.

In the event of a wildfire, future residents of the proposed project could also be contacted through the Alert Yolo system, a component of a partnership between public safety agencies in Yolo, Sacramento, and Placer counties to alert residents about emergency events and other important public safety information through a community notification system. All members of the public can sign up for Alert Yolo through OES' website and elect to receive notifications of emergency situations through various means, including text messages and email.

During project construction, temporary street closures could be required; however, as required by Mitigation Measure 4.13-1 in the Transportation chapter of this EIR, any temporary lane closures would be coordinated with the City Department of Public Works and local emergency services providers. Furthermore, complete closure of roadways is not anticipated.

Based on the above, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.15-2 Due to factors such as on-site fuel sources, slope, and prevailing winds, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Based on the analysis below, the impact is *less than significant*.

CEQA Guidelines Appendix G indicates that the extent and nature of on-site vegetation, which would serve as fuel for a wildfire, should be evaluated to determine the potential for a project to exacerbate wildfire risk. With respect to vegetation associated with the project site, the site consists primarily of seasonally planted crops and existing trees, the latter of which include trees located along East Covell Boulevard and along both sides of Channel A in the northern portion of the site. Development of the proposed project would include site-clearing activities, which would remove on-site vegetation and trees along East Covell Boulevard. As such, development of the site with the proposed uses would reduce the risk of wildland fire to surrounding areas, because site improvements, such as the proposed structures, internal streets, and irrigated on-site landscaping, would reduce readily combustible vegetation and act as

a fuel break. The proposed project would include the planting of 2,500 landscaping trees; however, such landscaping would be maintained and irrigated, and would not contribute to wildfire risks. Additionally, wildfire risks would not be exacerbated during project operation, as residential, neighborhood retail, and public uses typically do not involve operational components that would increase the risk of wildfire.

The proposed project would be required to comply with all applicable State and local standards and regulations associated with prevention of wildfire hazards, including Davis Municipal Code Sections 8.01.010 and 13.01.010, which serve to adopt and amend, as applicable, the CBSC and CFC. The CFC requires that an automatic fire-sprinkler and/or fire-extinguishing system be installed throughout new residential and commercial buildings 3,600 sf and larger. In addition, the project would be subject to the applicable provisions set forth in Davis Municipal Code Chapters 36 and 39, which contains requirements for subdivisions related to water supply for the purposes of fire flow, including provisions related to hydrants, delivery rate, and maintenance of the water system. Furthermore, the DFD enforces standards set forth in the CBSC associated with the installation of residential fire-sprinkler systems and the installation of appropriate roofing materials within all residential units. Both State and local requirements would significantly assist in reducing the threat of a wildfire spreading from agricultural land to the proposed structures, as well as the potential of fire spreading from the site to surrounding areas.

The proposed project would include preservation of agricultural land as part of the 44.3-acre Urban Agricultural Transition Area (UATA) in the northern and eastern portions of the site, as well as various parks and greenbelts that would occur along portions of three of the project site's boundaries and within the central portion of the site. The western site boundary would be bordered by the existing Wildhorse Agricultural Buffer. Thus, the proposed project would include vegetated areas as part of project operation. However, the agricultural land within the UATA and on-site parks and greenbelts would be actively managed and regularly irrigated, which would ensure the vegetation is sufficiently watered so as not to result in excessively dry fuel sources. In addition, the existing conditions of the UATA would be subject to minor modifications during project construction, including the proposed trail connections and drainage basins. Such modifications would reduce a small portion of the fuel sources located within the UATA, thereby providing a potentially beneficial effect. Thus, the proposed project would not exacerbate wildfire risks associated with the UATA.

Overall, through removal of on-site vegetation, compliance with State and local regulations, and routine irrigation of the UATA, parks, and greenbelts, the proposed project would not exacerbate wildfire risks due to on-site vegetation, and a less-than-significant impact would occur.

Wildfire Risks Due to Slope

The project site and the City of Davis do not contain steep or significant slopes, which limits wildfire risks related to topography in the project region. Based on the existing topography of the site, slope would not affect on-site fire behavior, as compared to the increasingly hilly landscapes that rise in the northern and western portions of the County. Therefore, the proposed project would not exacerbate wildfire risks due to slope, and a less-than-significant impact would occur.

Wildfire Risks Due to Prevailing Winds

With respect to prevailing winds at the project site, as previously discussed, winds from the north are most dominant from mid-October to late-February, which is outside of the season that wildfires in the project region commonly occur. While winds also occur from the west for a portion of the year, especially during the summer months, land west of the site is primarily developed with residential uses, which reduces the potential of wildfire spreading to the project site due to prevailing winds from the west.

As discussed above, the majority of on-site fuel sources would be removed as part of development of the proposed project. Thus, development of the project site with the proposed uses would not exacerbate wildfire risks due to prevailing winds, and a less-than-significant impact would occur.

Conclusion

Based on the above, the proposed project would not exacerbate wildfire risks due to factors such as site fuel sources, slope, and prevailing winds, and, thereby, would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, a ***less-than-significant*** impact could occur.

Mitigation Measure(s)

None required.

4.15-3 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. Based on the analysis below, the impact is *less than significant*.

Development of the proposed project would include construction of various infrastructure components, including on-site roadway improvements; connections to existing water, sewer, and power lines; installation of new storm drain lines and new detention and retention basins; traffic calming measures, including traffic circles and raised crosswalks; and other improvements. All potential physical environmental impacts that could result from development of the proposed project, including the proposed infrastructure improvements, have been evaluated throughout the technical chapters of this EIR.

The proposed roadway improvements would not exacerbate fire risks, as operation of the roadways does not involve sources of ignition and, thus, would not involve components that could potentially ignite fuel sources. Additionally, new electrical infrastructure installed as part of the proposed project would be undergrounded, which would reduce fire risks during operations. As previously discussed, the proposed project would also be subject to the applicable provisions set forth in Davis Municipal Code Chapters 36 and 39, which contains requirements for subdivisions related to water supply for the purposes of fire flow, including provisions related to hydrants, delivery rate, and maintenance of the water system. The fire hydrants within the project site would meet all applicable DFD requirements. Long-term maintenance and

operation of the emergency water supply infrastructure would not involve any activities that would result in an increase in wildfire risk.

While the long-term maintenance of the proposed roadways, emergency water supply connections, power lines, and other utilities would not exacerbate fire risks, the activities associated with the initial construction and placement of the utilities and infrastructure could cause a temporary increase in fire risks due to the use of heavy equipment, which would contain combustible materials such as fuels and oils and ignition sources. However, the project contractor would be required to comply with all California Health and Safety Codes and local County ordinances regulating the handling, storage, and transportation of hazardous materials, which would minimize the potential for accidental conditions, including fire.

Based upon the above, the proposed project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, compound, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The geographic scope for the cumulative wildfire analysis generally includes buildout of the proposed project in conjunction with buildout of the Davis General Plan planning area, as well as a list of present and probable future projects. For more details regarding the cumulative setting, refer to Chapter 6, Statutorily Required Sections, of this EIR.

4.15-4 Increase in wildfire risk attributable to the proposed project in combination with cumulative development. Based on the analysis below, the cumulative impact is *less than significant*.

The cumulative setting for this EIR encompasses the City of Davis' General Plan planning area and present and probable future projects, a portion of which occur adjacent to the City Limits. In addition to the proposed project, Village Farms Davis, a 497.6-acre residential subdivision project along East Covell Boulevard approximately one mile west of the project site, is currently under review by the City. Just west of Wildhorse Agricultural Buffer is the approved Palomino Place Project, which is proposed on a 25-acre site and would include single- and multi-family housing, as well as health and training facilities open to the public. Other development projects undergoing planning review are located in the southern portion of the City, including two new multi-family residential apartment buildings, a new commercial hotel building, and a 700-unit residential neighborhood located on the 46.9-acre site formerly known

as the Nishi Housing Site. The Bretton Woods project, a senior residential community located northwest of the West Covell Boulevard/Risling Place intersection, is currently under construction. Finally, though rejected by voters, the City of Davis previously approved the Davis Innovation and Sustainability Campus (DiSC) 2022 Project, which was proposed for a 102-acre site (plus the 16.5-acre Mace Triangle property) located immediately to the east of Mace Boulevard and to the north of County Road (CR) 32A, northeast of the City Limits. Future development within the City of Davis would result in changes to the existing land use environment through conversion of vacant land to developed uses that would result in a reduction of existing vegetation, which would concurrently reduce wildfire sources and the risk of fire spread.

Additionally, the City of Davis and adjacent areas are not located within an SRA. As shown in Figure 4.15-1, the entirety of the City is located within an LRA Non-Very High FHSZ. Additionally, all development facilitated by buildout of the City of Davis General Plan planning area would be subject to existing regulations and guidelines designed to prevent wildfire hazards. Similar to the proposed project, development of other areas within or proposed for annexation into the City would be required to comply with Davis Municipal Code Sections 8.01.010 and 13.01.010, which serve to adopt and amend, as applicable, the CBSC and CFC. The DFD enforces standards set forth in the CBSC associated with the installation of residential fire-sprinkler systems and the installation of appropriate roofing materials within all residential units. As such, all buildings would meet all fire code requirements, as set forth by the CBSC and CFC, which could include fire sprinklers and fire alarms, as determined by the City's Fire Chief at building permit stage, depending upon building and occupancy type. Finally, similar to the project site, other sites within the City could currently include fuel sources such as undeveloped vegetated areas. However, development of said parcels, which would be subject to State and local regulations, would remove existing fuel sources, thereby reducing the cumulative risk of wildfire hazards.

Based on the above, the proposed project, in combination with reasonably foreseeable future development, would have a ***less-than-significant*** cumulative impact related to exacerbating wildfire risk.

Mitigation Measure(s)

None required.

5. Effects Not Found to be Significant

5. EFFECTS NOT FOUND TO BE SIGNIFICANT

5.1 INTRODUCTION

Section 15128 of the CEQA Guidelines requires that an EIR briefly describe why various environmental effects were determined not to be significant and therefore were not discussed in detail in the EIR. The Effects Not Found to be Significant chapter of this EIR summarizes environmental issues that were determined not to be significant with implementation of the proposed project. The reasons for the conclusion of non-significance are provided for each issue area, as applicable, below.

5.2 AESTHETICS

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.

Consistent with Appendix G of the CEQA Guidelines, a project's impact to scenic resources within a State scenic highway requires that such resources are viewable from an officially designated State scenic highway within the project's vicinity. According to the California Department of Transportation (Caltrans) State Scenic Highway Map, the nearest officially designated State scenic highway to the project site is State Route (SR) 160, located approximately 11.5 miles southeast of the City limits.[1] Therefore, the project site is not located in the vicinity of a State scenic highway, and the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a State Scenic Highway, and no impact would occur.

5.3 FORESTRY RESOURCES

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue areas:

- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code [PRC] Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]);
- Result in the loss of forest land or conversion of forest land to non-forest use; and
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

The project site is not considered forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), and is not zoned Timberland Production (as defined by

[1] California Department of Transportation. *California State Scenic Highway System Map.* Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed May 2025.

Government Code Section 51104[g]). In addition, installation of the proposed off-site improvements would occur either in existing roadway rights-of-way (ROWs) or in other previously disturbed areas. As such, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland, or result in the loss of forest land or conversion of forest land to non-forest use. Therefore, the project would result in no impact.

5.4 GEOLOGY AND SOILS

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- 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.

Sanitary sewer service for the proposed project would be provided by the City of Davis through new connections to the existing sewer system. The construction or operation of septic tanks or other alternative wastewater disposal systems is not included as part of the proposed project. Therefore, no impact would occur regarding the capability of soils to adequately support the use of septic tanks or alternative wastewater disposal systems.

5.5 HAZARDS AND HAZARDOUS MATERIALS

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue areas:

- 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 (see Chapter 5, Effects Not Found to be Significant); and
- 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 in the project area.

According to the Phase I Environmental Site Assessment prepared for the proposed project by Brusca Associates, Inc. (see Appendix L of this EIR),[2] the site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the proposed project would not create a significant hazard to the public or the environment associated with being located on such a site.

The project site is not located within an airport land use plan. Furthermore, the nearest public airport is the University Airport, which is owned by the University of California (UC) Davis, operated by Transportation Services of UC Davis, and is located approximately 4.68 miles southwest of the project site. As such, the project site is not located within two miles of any public airports or private airstrips, and the proposed project would not result in a safety hazard for people residing or working in the project area associated with an airport or airstrip.

[2] Brusca Associates, Inc. *Phase I Environmental Site Assessment*. February 12, 2024.

5.6 LAND USE AND PLANNING

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- Physically divide an established community.

The project site is bordered by agricultural land to the north and east, and existing residential development to the west and south, including single-family residences associated with the Wildhorse neighborhood, the approved Palomino Place development, and the Wildhorse Golf Course to the west; and single-family residences associated with the Mace Ranch and Frances Ellen Watkins Harper Junior High School to the south, across East Covell Boulevard. Because the project site is bordered by existing residential development to the west and south, with agricultural land on the other project boundaries, the proposed project would serve as an extension of the existing residential development. Therefore, no impact would occur related to the physical division of an established community.

5.7 MINERAL RESOURCES

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue areas:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

According to the City of Davis General Plan EIR, the most important mineral resources in the region are sand and gravel. A survey of aggregate resources by the State Division of Mines and Geology conducted in the General Plan EIR did not identify significant aggregate resources in the City's planning area. The only mineral resource known to exist in the planning area is natural gas, but resource areas are not identified in the General Plan Planning area. Therefore, development of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or in the loss of availability of a locally important mineral resource recovery site.

5.8 NOISE

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- 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.

As previously discussed, the project site is not located within the vicinity of a private airstrip, an airport land use plan, or two miles of a public airport or public use airport. The nearest public airport is the University Airport, which is owned by UC Davis, is operated by Transportation Services of UC Davis, and is located approximately 4.68 miles to the southwest of the project site. As such, the proposed project is not located within the vicinity of a private airstrip or an airport

land use plan or within two miles of a public airport or public use airport. Therefore, impacts related to exposing people residing or working in the area to excessive noise levels would not occur.

5.9 POPULATION AND HOUSING

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The project site is currently used for agricultural activities and does not contain existing residential development. In addition, installation of the off-site improvements would occur either in existing roadway ROWs or in other previously disturbed areas. Thus, the proposed project would not result in the displacement of existing people or housing, necessitating the construction of replacement housing elsewhere, and no impact would occur.

5.10 WILDFIRE

Consistent with Appendix G of the CEQA Guidelines, the proposed project was determined to have no impact with regard to the following issue area:

- 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.

The project site does not feature steep or significant slopes and is generally flat. As such, the proposed project would not exacerbate fire risks or expose people or structures to risks due to slope. Therefore, impacts related to exposing 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, would not occur.

6. Statutorily Required Sections

6. STATUTORILY REQUIRED SECTIONS

6.1 INTRODUCTION

The Statutorily Required Sections chapter of the Draft EIR includes discussions regarding those topics that are required to be included in an EIR, pursuant to CEQA Guidelines, Section 15126.2. The chapter includes a discussion of the proposed project's potential to result in growth-inducing impacts; the cumulative setting analyzed in this EIR; significant irreversible environmental changes; and significant and unavoidable impacts caused by the proposed project.

6.2 GROWTH-INDUCING IMPACTS

State CEQA Guidelines Section 15126.2(d) requires an EIR to evaluate the potential growth-inducing impacts of a proposed project. Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth can be induced in a number of ways, including the elimination of obstacles to growth, or by encouraging and/or facilitating other activities that could induce growth. Examples of projects likely to have growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or office complexes in areas that are currently only sparsely developed or are undeveloped.

The CEQA Guidelines are clear that while an analysis of growth-inducing effects is required, it should not be assumed that induced growth is necessarily significant or adverse. This analysis examines the following potential growth-inducing impacts related to implementation of the proposed project and assesses whether these effects are significant and adverse (see CEQA Guidelines, Section 15126.2[d]):

1. Foster population and economic growth and construction of housing.
2. Eliminate obstacles to population growth.
3. Affect service levels, facility capacity, or infrastructure demand.
4. Encourage or facilitate other activities that could significantly affect the environment.

Foster Population and Economic Growth and Construction of Housing

As discussed in and Chapter 4.11, Population and Housing, of this EIR, the proposed 1,250 residential units would increase the available housing within the City of Davis, which would be expected to increase population in the area. Using the 2.57 persons/household average household size for the City of Davis, the proposed 1,250 residential units would be anticipated to house an estimated 3,213 residents. Because the project site is currently located in Yolo County, a General Plan Amendment to redesignate the project site with a City of Davis land use designation will be required. In addition to the General Plan Amendment, a Sphere of Influence (SOI) Amendment, Annexation, Pre-zoning, Development Agreement, and Affordable Housing Plan would be required by the City of Davis for project approval. As such, the proposed project has not been included as part of the City's growth projections. Development of the proposed project would increase the total current population of the City of Davis from 65,832 to approximately 69,045, or a 4.9 percent increase. The population growth associated with the

proposed project has not been included as part of the City's growth projections and would result in an increase beyond what is currently anticipated for the site.

Future residents of the proposed project would likely patronize local business and services in the area, fostering economic growth. While construction of the proposed project could result in increased employment opportunities in the construction field, potentially resulting in increases in population and housing demand, the nature of this change in demand would be temporary, lasting only as long as construction of the proposed project. Short-term employment opportunities associated with construction activities would become available, which would likely be filled by the local employee base. Employment opportunities created by the proposed project could include household and landscape maintenance jobs, and jobs associated with the neighborhood retail uses, daycare facility, and community park. New jobs generated by such uses would not be substantial in number and would also likely be filled by the local employee base. Therefore, the proposed project and any associated population growth, would not result in significant long-term employment growth in the area.

Appendix G of CEQA Guidelines has been recently amended to clarify that unplanned population growth would be considered a potentially significant impact. However, growth that is planned, and the environmental effects of which have been analyzed in connection with a land use plan or a regional plan, should not by itself be considered an impact. As discussed in further detail under Impact 4.11-1 within the Population and Housing chapter of this EIR, the proposed project would result in population growth within the City of Davis. While new infrastructure improvements would be sized to accommodate only the proposed project, improvements would include development that would result in direct on-site unplanned population growth. Population growth resulting from the proposed project would not be within the Sacramento Area Council of Governments (SACOG) or City of Davis growth estimates for the project area. Thus, the proposed project would induce substantial unplanned population growth, and a significant impact related to population and economic growth would occur.

Eliminate Obstacles to Population Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services, would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

As discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, upon annexation of the project site into the City Limits, the existing City of Davis water system would be used to connect new water lines to the proposed project. In the immediate project vicinity, new water lines would connect to an existing water line in East Covell Boulevard. From the new water lines, installed within the new on-site internal streets, water service would be provided to each structure through new water laterals. Similarly, sanitary sewer service would be provided by the City of Davis through new connections to the existing sewer system in the site vicinity. However, as the City's WWTP may be at or nearing its available capacity, and the project would pay its fair share toward future expansion of the WWTP, the project could contribute toward eliminating obstacles to population growth.

The improved on-site utilities infrastructure would be sized to serve only the proposed project and would be financed by the project applicant. Consequently, the construction of on-site utilities infrastructure would not be anticipated to result in elimination of obstacles to population growth in the area.

The proposed project would require approval of a SOI Amendment from the Yolo Local Agency Formation Commission (LAFCo) in order to bring the project site within the City of Davis SOI, and annexation of the project site into the City of Davis. The site is bounded by the City of Davis boundary to the west and south. Therefore, City of Davis would not need to extend existing water and sewer infrastructure through intervening unincorporated County lands where services are not currently provided. Upon annexation of the project site into the City Limits, utility services would be provided to the proposed project by the City of Davis, as described above. Doing so would have a negligible effect on growth, as new utility infrastructure would not be installed in any unincorporated lands surrounding the site or the City of Davis.

Because implementation of the aforementioned improvements would be developed to serve only the proposed project, such improvements would not be considered to eliminate obstacles to growth in a manner that would encourage previously unplanned growth, with the possible exception of wastewater treatment capacity.

Affect Service Levels, Facility Capacity, or Infrastructure Demand

Increases in population that would occur as a result of a proposed project may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental impacts. As discussed in Chapter 4.12, Public Services and Recreation, of this EIR, fire and police protection services would be provided to the proposed project by the Davis Fire Department (DFD) and the Davis Police Department (DPD), respectively. Implementation of the project would increase the number of structures protected by local fire protection services; as such, DFD has identified the potential need for a fire station in the northeastern portion of the City. If the facility is not accommodated elsewhere, the proposed project has reserved land to accommodate the fire station on a parcel in the southwestern portion of the site, adjacent to East Covell Boulevard. As described in Chapter 3, Project Description, of this EIR, the new fire station would ultimately be designed and implemented by the DFD, but could consist of a four-bay fire station. Similarly, the increase in residents resulting from the proposed project would increase the demand for DFD services. However, based upon correspondence with the DPD, the increase in demand could be accommodated through existing DPD facilities, and new or expanded police facilities would not be required as a result of the proposed project.[1]

Furthermore, as discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, although the proposed project would include connection to the existing wastewater treatment and water supply facilities provided by the City of Davis, through compliance with all applicable federal, State, and City regulations, significant environmental impacts would not occur, with the exception of wastewater treatment capacity.

The landfill that would serve the proposed project has adequate capacity to manage the solid waste generated as a result of the project, as described in Chapter 4.14, Utilities and Service Systems, of this EIR. Furthermore, mitigation measures set forth in Chapter 4.8, Hydrology and

[1] Antonia Dias, Intelligence-Led Policing (ILP) Sergeant, City of Davis Police Department. *Personal Communication [email] with Nick Pappani, Vice President, Raney Planning and Management.* September 5, 2025.

Water Quality, of this EIR would ensure that the proposed project would not create or contribute runoff water that would exceed the capacity of the City's stormwater drainage systems.

Therefore, the proposed project would not increase population such that service levels, facility capacity, or infrastructure demand would require construction of new facilities that could cause significant environmental impacts, with the exception of wastewater treatment capacity.

Encourage or Facilitate other Activities That Could Significantly Affect the Environment

This EIR provides a comprehensive assessment of the potential for environmental impacts associated with implementation of the proposed project. Please refer to Chapters 4.1 through 4.15 of this EIR, which comprehensively address the potential for impacts from urban development on the project site.

6.3 CUMULATIVE IMPACTS

CEQA Guidelines, Section 15130 requires that an EIR discuss the cumulative and long-term effects of the proposed project that would adversely affect the environment. "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects" (CEQA Guidelines, Section 15355, subd. [a]). "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines, Section 15355, subd. [b]).

The need for cumulative impact assessment reflects the fact that, although a project may cause an "individually limited" or "individually minor" incremental impact that, by itself, is not significant, the increment may be "cumulatively considerable," and, thus, significant, when viewed together with environmental changes anticipated from past, present, and probable future projects (CEQA Guidelines, Section 15064, subd. [h(1)], Section 15065, subd. [c], and Section 15355, subd. [b]). Accordingly, particular impacts may be less than significant on a project-specific basis but significant on a cumulative basis if their small incremental contribution, viewed against the larger backdrop, is cumulatively considerable. However, it should be noted that CEQA Guidelines, Section 15064, subdivision (h)(5) states, "[…] the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable." Therefore, even where cumulative impacts are significant, any level of incremental contribution is not necessarily deemed cumulatively considerable.

Section 15130(b) of CEQA Guidelines indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, but that analysis should reflect the severity of the impacts and their likelihood of occurrence, and that the analysis should be focused, practical, and reasonable. To be adequate, a discussion of cumulative effects must include the following elements:

(1) Either (a) a list of past, present and probable future projects, including, if necessary, those outside the agency's control, or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which

described or evaluated regional or area-wide conditions contributing to the cumulative impact, provide that such documents are reference and made available for public inspection at a specified location;

(2) A summary of the individual projects' environmental effects, with specific reference to additional information and stating where such information is available; and

(3) A reasonable analysis of all of the relevant projects' cumulative impacts, with an examination of reasonable, feasible options for mitigating or avoiding the project's contribution to such effects (Section 15130[b]).

For some projects, the only feasible mitigation measures will involve the adoption of ordinances or regulations, rather than the imposition of conditions on a project-by-project basis (Section 15130[c]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund the project's fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

A discussion of cumulative impacts is provided within each of the technical chapters of this EIR pursuant to CEQA Guidelines Section 15130.

Cumulative Setting

The lead agency should define the relevant geographic area of inquiry for each impact category (id., Section 15130, subd. [b][3]), and should then identify the universe of "past, present, and probable future projects producing related or cumulative impacts" relevant to the various categories, either through the preparation of a "list" of such projects or through the use of "a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact" (id., subd. [b][1]).

The majority of the cumulative analysis in this EIR is based upon a summary of projections contained in the City of Davis General Plan, as well as other reasonably foreseeable projects within the project region. Present and future probable local projects within the City of Davis include, but are not limited to, the following projects: Palomino Place; Village Farms Davis; Davis Innovation Sustainability Campus (DiSC) 2022; the Cannery Remainder Commercial Parcels; Sutter Davis Expansion (including adjacent Communicare Expansion); various Bretton Woods developments; the Promenade/Nishi; and Olive Drive Mixed Use.

Limited situations exist where geographic setting differs between project chapter analysis within a particular region. Examples include air quality, for which the cumulative geographic setting is the Sacramento Valley Air Basin (SVAB). Global climate change is, by nature, a cumulative impact. Greenhouse gas (GHG) emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change (e.g., sea level rise, impacts to water supply and water quality, public health impacts, impacts to ecosystems, impacts to agriculture, and other environmental impacts). A single project could not generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from a project in combination with other past, present, and future projects could contribute substantially to the world-wide phenomenon of global climate change and the associated environmental impacts. Although the geographical context for global climate change is the Earth, for analysis purposes under CEQA, and due to the regulatory context pertaining to



GHG emissions and global climate change applicable to the proposed project, the geographical context for global climate change in this EIR is limited to the State of California.

For hydrology and water quality, the cumulative analysis appropriately focuses on the Covell Drain and East Davis watersheds, within which the project site is located.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

As established in CEQA Guidelines Section 15126.2(c), this EIR is required to include consideration of significant irreversible environmental changes that would be caused by the proposed project, should the project be implemented. An impact would be determined to be a significant and irreversible change in the environment if:

- Buildout of the project area could involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of development could generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- Development of the proposed project could involve uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing and eventual development of the project could result in an unjustified consumption of resources (e.g., the wasteful use of energy).

The proposed project would likely result in, or contribute to, the following significant irreversible environmental changes:

- Conversion of predominantly vacant land to a fully built-out community with residential, retail, and recreational uses, thus precluding alternative land uses in the future;
- Irreversible consumption of goods and services, such as fire, police, and school services, associated with the future population; and
- Irreversible consumption of energy and natural resources, such as water and electricity, associated with the future residential and retail uses.

6.5 SIGNIFICANT AND UNAVOIDABLE IMPACTS

According to CEQA Guidelines, an EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented (CEQA Guidelines Section 15126.2[b]). Such impacts would be considered unavoidable when the determination is made that either mitigation is not feasible or only partial mitigation is feasible such that the impact is not reduced to a level that is less-than-significant. This section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigations imposed by the City. The final determination of the significance of impacts and the feasibility of mitigation measures would be made by the City as part of the City's certification action. The significant and unavoidable impacts of the proposed project are summarized below.

In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality. (Impact 4.1-2)

The project site is located within a non-urbanized area; therefore, the relevant threshold is whether the proposed project would substantially degrade the existing visual character or quality

of public views of the site and its surroundings. The proposed project would consist of a mixed-use community comprised of both affordable and market-rate single- and multi-family residences, as well as, transit improvements; neighborhood retail uses; a daycare facility; associated on-site roadway improvements; utility improvements; and recreational uses. The new residential units would be constructed in accordance with the applicable development standards established in the Davis Municipal Code for each relevant zoning designation, and would be required to adhere to the plans submitted by the applicant, pursuant to the proposed Development Agreement. Development of the foregoing project components would entirely replace views of the existing agricultural field with the proposed development.

The proposed project would include an Urban Agricultural Transition Area (UATA) in the northern and eastern portions of the site that would serve as a buffer between the surrounding agricultural land and the proposed project. The on-site UATA would be designed to emulate a natural appearance that provides a natural separation between agricultural and urban uses. Similarly, the parking spaces provided adjacent to East Covell Boulevard would be buffered with landscaping, along the entire length of the project frontage.

Nonetheless, given that the proposed project would convert views of the site from the existing agricultural landscape to a mixed-use development, the existing visual character and quality of public views of the project site would be significantly altered. Although the proposed project would reduce the severity of the aesthetic impact of the proposed project through the incorporation of landscaping and buffers, feasible mitigation does not exist to reduce the above impact to a less-than-significant level. Therefore, the potential impact associated with development of the proposed project would remain significant and unavoidable.

Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout of the City of Davis General Plan. (Impact 4.1-4)

Due to the location of the project site, the geographic setting for analysis of long-term cumulative effects on visual character is cumulative buildout of the project site in conjunction with future buildout of the City's General Plan and reasonably foreseeable development along the East Covell Boulevard corridor. Other planned development projects in the cumulative setting for the proposed project include the Village Farms Davis Project, the DiSC 2022 Project, and the approved Palomino Place Project. The sites of the DiSC 2022 and Village Farms Davis projects are both located on existing agricultural land outside of the City Limits along East Covell Boulevard, whereas the Palomino Place project site is within the City Limits.

As discussed in Chapter 4.1, Aesthetics, of this EIR, the three aforementioned projects are separated from the project site by intervening urban and agricultural uses. Development of other approved projects, as well as the project site, would change the existing visual character of those locations from vacant or minimally developed land to more intensively developed residential areas. Such projects would be required to comply with applicable City requirements, including the City's Municipal Code, General Plan policies, and development standards set forth by project-specific plans. Nonetheless, the project site is predominantly undeveloped and affords views from East Covell Boulevard of agricultural landscape, which would be significantly altered following project construction. Therefore, in context with the planned development along East Covell Boulevard in the project vicinity, the project's incremental contribution to the significant impact related to altering the visual character of the surroundings would be cumulatively considerable. Feasible mitigation does not exist to reduce such an impact to a less-than-significant level. Due

to the substantial degradation of the existing visual character and quality of public views of the project site, the impact associated with construction of the proposed project in combination with cumulative development would be cumulatively considerable and significant and unavoidable.

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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A. (Impact 4.2-1)

Pursuant to the California Department of Conservation (DOC) Important Farmland Finder, the project site contains approximately 215.2 acres of Farmland, comprised of approximately 192.7 acres of Prime Farmland and approximately 22.5 acres of Farmland of Statewide Importance. The site also meets the City's definition of "agricultural land" and Yolo County's definition of "prime agricultural land."

Because the entire project site is in agricultural use, as defined by the Davis Municipal Code, agricultural mitigation would be required for the full site acreage, with the exception of the proposed UATA. The City's agricultural mitigation requirement would satisfy Yolo County's agricultural land mitigation ratio requirement, and Yolo LAFCo's agricultural land mitigation ratio requirement, as discussed in Chapter 4.2, Agricultural Resources, of this EIR. While the mitigation measures would preserve Farmland acreage elsewhere, such preservation would not create new Farmland. As such, the proposed project would lead to an overall loss of Farmland. Therefore, the impact would remain significant and unavoidable.

Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use. (Impact 4.2-4)

Village Farms Davis and DiSC 2022 would result in the conversion of Farmland, as defined by CEQA, to non-agricultural uses. The present and probable future projects within the City of Davis would also be subject to the agricultural land mitigation measures for the loss of Farmland established by the appropriate jurisdiction. Nonetheless, the foregoing projects would further contribute to the cumulative loss of existing Farmland in and adjacent to the City of Davis.

Based on the above, development facilitated by buildout of the City's General Plan, as well as other present and/or probable future projects, would result in a significant impact related to the conversion of Farmland to non-agricultural uses. Thus, the contribution of the proposed project to the significant cumulative impact would be cumulatively considerable and significant and unavoidable due to the permanent loss of agricultural land attributable to the proposed project.

Conflict with or obstruct implementation of the applicable air quality plan during project operation. (Impact 4.3-2)

As discussed in Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, while the proposed project's maximum unmitigated operational emissions of oxides of nitrogen (NO_X) and particulate matter 10 micrometers in diameter or smaller (PM_{10}) would be below the applicable Yolo-Solano Air Quality Management District (YSAQMD) threshold of significance, maximum unmitigated operational emissions of reactive organic gas (ROG) would exceed the applicable YSAQMD threshold of significance. Accordingly, the proposed project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.

The majority of the operational ROG emissions are associated with area sources which are largely from consumer products and mobile sources. Implementation of Mitigation Measure 4.3-2 would reduce the operational area source emissions associated with the proposed project through the use of zero-volatile-organic-compound (zero-VOC) paints, finishes, adhesives, and cleaning supplies as shown in Table 4.3-12 of Chapter 4.3, Air Quality, GHG Emissions, and energy, of this EIR. However, even with the implementation of Mitigation Measure 4.3-2 operational ROG emissions associated with the proposed project would continue to exceed the applicable threshold of significance. Possible additional mitigation measures for further reducing consumer product emissions could include limitations on consumer products at the site, but such mitigation cannot be feasibly enforced or verified.

With regard to mobile source emissions, implementation of Mitigation Measure 4.13-4 as set forth in the Transportation chapter of this EIR, which requires implementation of Transportation Demand Management (TDM) strategies to reduce the number of vehicle trips that would be generated by the residential component of the proposed project, would further reduce operational mobile source ROG emissions. However, the effectiveness of the TDM strategies can vary based on a variety of factors, are site-specific in nature, and rely on implementation and/or adoption by private entities and other agencies. Thus, the effectiveness of the TDM strategies cannot be quantified and subsequent vehicle trip reduction effects cannot be guaranteed. Furthermore, the proposed project's inherent site and/or design features that would reduce vehicle trips and vehicle miles traveled (VMT), thereby reducing mobile source emissions of criteria pollutants, including ROG, have already been accounted for in the project-specific modeling. Additional measures for the reduction of mobile source emissions sufficient to reduce emissions of ROG to below the applicable thresholds of significance, are not available, nor feasible for the proposed project at this time. Because additional feasible mitigation for the reduction of the proposed project site's operational ROG emissions to below the applicable thresholds of significance is not currently available, even with implementation of mitigation, the impact would be significant and unavoidable.

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). (Impact 4.3-6)

By nature, air pollution is largely a cumulative impact, and in combination with other proposed and pending projects in the region, the proposed project would significantly contribute to air quality effects within the Sacramento Valley Air Basin (SVAB), resulting in an overall significant cumulative impact. As discussed in Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, unmitigated operational emissions of NO_X and PM_{10} associated with the proposed project would be below the YSAQMD's applicable thresholds of significance. However, the proposed project would result in operational emissions of ROG that would exceed the applicable YSAQMD threshold of significance. Consequently, implementation of the proposed project could violate an air quality standard, contribute substantially to an existing or projected air quality violation, conflict with the YSAQMD's adopted attainment plans, or inhibit attainment of regional ambient air quality standards (AAQS). Therefore, implementation of the proposed project could violate air quality standards and thereby contribute towards regional health effects associated with the existing nonattainment status of ozone and particulate matter (PM) standards.

Because operational ROG emissions associated with the proposed project would not be reduced to below the applicable threshold of significance, even with mitigation, and because additional feasible mitigation sufficient to reduce the proposed project operational ROG emissions to below the YSAQMD's threshold of significance is not currently available, the proposed project's incremental contribution to the significant cumulative effect would be cumulatively considerable and significant and unavoidable.

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation. (Impact 4.3-8)

The City of Davis has adopted a Climate Action Adaption Plan (CAAP), as well as emissions reductions targets and emissions allowances for projects within the City. In recognition of the City Council's actions and emissions reductions efforts and policies enacted by the City's CAAP, for the purposes of this EIR, the proposed project would be considered to have a significant impact if emissions from proposed project operations would result in net positive operational emissions in the year 2040. Should the proposed project be shown to reach net neutrality by the year 2040 compared to existing emissions levels associated with the site, the proposed project would be considered to provide a proportional share of emissions reductions and would not inhibit attainment of citywide net carbon neutrality by the year 2040, nor would the proposed project conflict with the City's CAAP. Project-specific features sufficient to reduce the anticipated emissions to net carbon neutrality by the year 2040 are not currently included in the proposed project. Because project emissions could exceed net carbon neutrality in the year 2040, implementation of the proposed project would conflict with the City's adopted goal of carbon neutrality by the year 2040.

Implementation of Mitigation Measure 4.3-8 would achieve a downward trajectory of operational GHG emissions, assuming an equal-level reduction per year sufficient to reach zero metric tons of carbon dioxide (CO_2) equivalents ($MTCO_2e$/yr) by 2040. However, due to uncertainties related to the potential efficacy and feasibility of the GHG reductions measures, as well as the availability of off-site carbon credit programs, the full GHG reductions associated with the proposed project cannot be guaranteed at this time.

Based on the above, implementation of the proposed project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG, and the proposed project's incremental contribution to this significant cumulative impact would be cumulatively considerable and significant and unavoidable.

Generation of a substantial temporary 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. (4.10-1)

As discussed in Chapter 4.10, Noise, of this EIR, the City has not adopted any formal standard for evaluating temporary construction noise which occurs within allowable hours. For short-term noise associated with project construction, the City has elected to use an increase criteria for A-weighted sound levels (expressed as dBA) of five dBA, applied to existing residential receptors in the project vicinity. As shown Table 4.10-10 of Chapter 4.10, Noise, of this EIR, construction

of the proposed project is predicted to generate noise-level increases over ambient conditions greater than five dBA at surrounding sensitive receptors. Mitigation Measure 4.10-1 would include installation of an eight-foot-tall temporary noise barrier at the boundary of the construction area adjacent to residential uses in order to reduce temporary construction noise levels at the nearest sensitive receptors. The temporary barriers would reduce construction noise levels associated with three construction areas to below the applicable significant increase criteria of five dBA. However, construction noise associated with the majority of construction areas would remain over the five dBA increase criteria. Based on the above, noise levels associated with construction activities would result in a significant temporary noise level increase at the nearest sensitive receptors. Therefore, although implementation of mitigation would reduce the severity of the significant impact, the impact would remain significant and unavoidable.

Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure). (Impact 4.11-1)

The 1,250-unit affordable and market-rate single- and multi-family residential uses associated with the proposed project would increase the available housing within the City of Davis, which would increase population in the area. Using the 2.57 persons/household average household size for the City of Davis, the proposed 1,250 residential units would house an estimated 3,213 residents. Residential development is not allowed under the existing Yolo County General Plan land use and zoning designations for the project site, with the exception of farmworker housing. Thus, the proposed project would result in an increase of approximately 1,250 units, or 3,213 residents, beyond what is currently anticipated for the site.

Annexation of the project site into the City and development of 1,250 residential units, with the associated addition of approximately 3,213 residents, would increase the total current population of the City of Davis from 65,832 to approximately 69,045, or a 4.9 percent increase. SACOG has projected that the City's population could grow to as much as 76,884 residents by 2036. However, because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the proposed project has not been included as part of the City's growth projections. Therefore, the increase in population resulting from the proposed project would not be within the range of growth projections assumed for the City of Davis. As discussed in Chapter 4.14, Utilities and Service Systems, of this EIR, the proposed utility improvements related to water, sanitary sewer, and storm drainage services would be sized to accommodate only the proposed project and would connect to existing infrastructure in the project vicinity.

Nonetheless, the proposed project would include development that would result in direct unplanned population growth that would not be within the City of Davis growth estimates for the project area. Feasible mitigation does not exist to reduce the potential impact, and as a result, substantial unplanned population growth would result in a significant and unavoidable impact.

Cumulative unplanned population growth. (Impact 4.11-2)

As discussed above, the population growth related to implementation of the proposed project has not been anticipated for the region. However, population growth itself does not constitute a significant physical environmental effect. Rather, the determination of significance is based on whether population growth associated with a project could result in indirect physical environmental impacts.

Buildout of the City of Davis was anticipated to result in population growth within the plan area through the buildout of urban and rural developments. Since approval of the General Plan, the City has approved several large residential projects, such as the Cannery Subdivision with 610 residential units, located adjacent to the project site, the Bretton Woods Subdivision with 560 residential units, and the Palomino Place Project with 175 residential units. In addition, the Davis Innovation and Sustainability Campus (DiSC) 2022, with 460 units, was approved by City Council but denied by public voters. The approval of the aforementioned residential development projects has increased the amount of land designated for residential development within the City. In addition, several new residential subdivisions are currently proposed, including Village Farms Davis with 1,800 residential units, located approximately 1.03 miles west of the project site. It should be noted that the Village Farms Davis Project is also located outside the City Limits, and, therefore, the addition of the 1,800 residential units associated with the Village Farms Davis Project would be unplanned. In total, the aforementioned residential developments, in combination with the proposed project, would result in a total of 4,855 new residential units within the City of Davis. The General Plan Housing Element projected that a total of 1,737 housing units would be developed in the City between 2020 and 2036; thus, development of the proposed project with 1,250 residential units, in combination with other cumulative development in the City of Davis, would result in a cumulative significant impact related to cumulative unplanned population growth.

Feasible mitigation does not exist to reduce the above potential impact to a less-than-significant level. Therefore, the impact would remain cumulatively considerable and significant and unavoidable.

Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (Impact 4.13-4)

According to the TIS, the residential component of the proposed project would generate residential VMT per capita eight percent and 50 percent above baseline local and regional residential VMT per capita averages, respectively. As such, the residential component of the proposed project would generate residential VMT per capita exceeding 15 percent below baseline regional residential VMT per capita averages. Compliance with Mitigation Measure 4.13-4 would reduce project-generated VMT per capita by implementing TDM strategies to reduce external vehicle trips generated by project residents. However, the effectiveness of the TDM strategies cannot be quantified at this time and subsequent vehicle trip reduction effects cannot be guaranteed. Moreover, many TDM strategies are site-specific and rely on implementation and/or adoption by private entities and other agencies. Even with TDM strategy implementation, it is uncertain if TDM strategies would be able to sufficiently reduce VMT generated by the project to levels below the thresholds of significance. Therefore, due to uncertainties regarding the ability for the mitigation measure to reduce VMT to a less-than-significant level, the project's VMT impact would be considered significant and unavoidable.

Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. (Impact 4.13-8)

Under cumulative conditions, substantial increases in background vehicle travel activity would occur on study area roadways due to reasonably foreseeable land use development elsewhere in and around the City of Davis. Together with the increase in vehicle travel activity caused by the proposed project, including the proposed north leg to the East Covell Boulevard/Alhambra Drive

intersection, increases in vehicle travel activity would cause adverse effects to transit operations by increasing transit service delay and running times in a manner inconsistent with Unitrans performance standards.

In addition, the TIS notes that extreme delays and queuing are anticipated on westbound East Covell Boulevard at the Alhambra Drive/Westerly Project Access intersection under cumulative plus project conditions. The cumulative effects of additional background trips plus the project trips necessitate a second westbound through lane to avoid causing added delays to buses traveling in that direction. The project applicant would be required to provide a fair share payment towards the addition of the second westbound travel lane along the project frontage, as required by Mitigation Measure 4.13-8(b), thereby reducing the average PM peak hour delay per vehicle at the East Covell Boulevard/Alhambra Drive/Westerly Project Access intersection from about three minutes to 30 seconds. In addition, , the improvements that are necessary to improve transit service and facilities that would be identified as an outcome of Mitigation Measure 4.13-8(a) would require additional actions and implementation by Unitrans and Yolobus, which cannot be legally required to implement such actions. Therefore, due to the uncertainties regarding the ability for mitigation to reduce the impact to a less-than-significant level, the proposed project, in combination with future buildout of the City of Davis, could conflict with a program, plan, ordinance, or policy addressing transit facilities and services resulting in cumulatively considerable and significant impacts.

Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. (Impact 4.13-9)

As discussed above, the proposed project would cause a significant impact to VMT by virtue of resulting in residential VMT per capita measuring above the applicable significance thresholds relative to existing local and regional residential VMT per capita averages. Because the VMT impact analysis for Existing Plus Project conditions provide VMT significance thresholds based on existing development levels from an efficiency-based project-specific VMT analysis, an identical impact finding for a cumulative VMT analysis can be implied. Therefore, both the proposed project, in combination with future buildout of the City of Davis, would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) and a cumulatively considerable and significant impact would occur.

Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis. (Impact 4.13-11)

The TIS analyzed peak hour traffic operations to determine the extent to which the proposed project could cause off-ramp queues to spill back to the Interstate 80 (I-80) and State Route (SR) 113 mainline. To the extent possible, the California Department of Transportation (Caltrans) strives to prevent off-ramp queues from extending to the freeway mainline in order to minimize the potential for associated adverse operational and safety effects (e.g., speed differentials between vehicle traffic on the freeway mainline and stopped/queued off-ramp vehicle traffic that could increase the potential for conflicts). Table 4.13-6 in Chapter 4.13, Transportation, of this EIR, displays the maximum freeway off-ramp queues at the SR 113/West Covell Boulevard, I-

80/Mace Boulevard/Chiles Road, and I-80/County Road (CR) 32A/CR 32B interchanges under cumulative conditions. Under cumulative conditions, maximum queues would spill back onto the freeway mainline at the West Covell Boulevard/SR 113 Southbound Ramps, West Covell Boulevard/SR 113 Northbound Ramps, Mace Boulevard/I-80 Westbound Off-Ramp, and Chiles Road/I-80 Eastbound Ramp terminal intersections, which would conflict with Caltrans performance expectations related to safety for the State Highway System.

Implementation of Mitigation Measure 4.13-11 would reduce the proposed project's contribution to cumulative impacts by preventing off-ramp queues from spilling back onto the SR 113 and I-80 mainlines. However, elements of Mitigation Measure 4.13-11 would occur within Caltrans rights-of way and would be subject to final approval and actions by Caltrans. Moreover, because the remaining fair share contributions needed for the construction of the improvements have not been identified by the relevant lead agency, fair share payment by the project applicant would not ensure construction. Because Mitigation Measure 4.13-11 cannot be guaranteed, the impact would be significant and unavoidable.

Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Impact 4.14-3)

As discussed in Impact 4.14-3, Brown & Caldwell, under contract with the City of Davis, has recently completed preliminary testing of the City's WWTP capacity and tentatively confirmed that the WWTP may be at or nearing capacity. As shown in Table 4.14-5, the maximum influent ADWF from the proposed project is estimated to be approximately 0.2 mgd. As a result, adequate capacity may not exist to accommodate the proposed project's wastewater.

The City is currently working with Brown & Caldwell to identify the range of engineering options available to provide additional treatment capacity at the WWTP. The costs for the necessary upgrades to the WWTP will also need to be identified, and likely, included in the City's Capital Improvement Program. Implementation of Mitigation Measure 4.14-3 would require the applicant to pay its fair share towards future expansion of the WWTP, but because the costs for the necessary upgrades are not yet included in the City's CIP, the remaining funds necessary to guarantee completion of the upgrades are uncertain. As a result, the project's impact is considered significant and unavoidable.

Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City of Davis General Plan. (Impact 4.14-5)

Cumulative development would result in increased demand for wastewater treatment services, with the ADWF flows under cumulative buildout conditions projected to be 4.9 mgd. Brown & Caldwell, under contract with the City of Davis, has recently completed preliminary testing of the City's WWTP capacity and tentatively confirmed that the WWTP is likely at or nearing capacity. As a result, the proposed project in combination with reasonably foreseeable development could result in a significant impact related to WWTP capacity, and the project's incremental contribution could be cumulatively considerable. Implementation of the following Mitigation Measure 4.14-5 would require the applicant to pay its fair share towards future expansion of the WWTP capacity, and other reasonably foreseeable cumulative projects would be required to pay Wastewater Capacity Charges. However, the costs for the necessary upgrades are not yet included in the



City's CIP, and thus, the remaining funds necessary to guarantee completion of the upgrades are uncertain. As a result, the project's incremental contribution is considered significant and unavoidable.

7. Alternatives Analysis

7. ALTERNATIVES ANALYSIS

7.1 INTRODUCTION

The Alternatives Analysis chapter of the EIR includes consideration and discussion of a range of reasonable alternatives to the proposed project, as required pursuant to CEQA Guidelines Section 15126.6. Generally, the chapter includes discussions of the following: the purpose of an alternatives analysis; alternatives considered but dismissed; a reasonable range of project alternatives and their associated impacts in comparison to the proposed project's impacts; and the environmentally superior alternative.

7.2 PURPOSE OF ALTERNATIVES

The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126.6(a) of the CEQA Guidelines, is to "[…] describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." In the context of CEQA Guidelines Section 21061.1, "feasible" is defined as:

> [...]capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Section 15126.6(f) of CEQA Guidelines states, "The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." Section 15126.6(f) of CEQA Guidelines further states:

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

In addition, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

The CEQA Guidelines provide the following guidance for discussing alternatives to a proposed project:

- An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6[a]).
- Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if

these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (CEQA Guidelines Section 15126.6[b]).

- The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination […] Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts (CEQA Guidelines Section 15126.6[c]).
- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison (CEQA Guidelines Section 15126.6[d]).
- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines Section 15126.6[d]).
- The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (CEQA Guidelines Section 15126.6[e][1]).
- If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6[e][2]).

Project Objectives

Based on the above, reasonable alternatives to the project must be capable of feasibly attaining most of the basic objectives of the project. The proposed project is being pursued with the following objectives:

1. Provide a meaningful number of housing units for the City, in a balanced and wide variety of densities, products and price points.
2. Provide 20 percent of the total residential units for the construction of deed-restricted affordable housing for low, very low and extremely low-income households.
3. Provide more attainable homeownership opportunities for the "missing middle" households and young families, including 23 percent of the total residential units offering higher density condominiums/townhomes that are anticipated to be more attainable to these households.
4. Prioritize the use of high and medium density housing for the missing middle and young families who are currently unable to find or afford housing in Davis.
5. Create the type of housing that will encourage young families to buy and live in Davis, increasing the number of children attending Davis Joint Unified School District (DJUSD) schools.
6. Encourage people living outside and commuting in to Davis to live in Davis, thereby reducing regional vehicle miles traveled (VMT) and associated environmental impacts.

7. Respect existing agricultural uses by providing buffers that create a transitional space and encourage residents to appreciate the value of both uses coexisting together while establishing a thoughtfully designed urban City boundary.
8. Develop an inclusive community for all, including those with intellectual or developmental disabilities with independent housing, recreation, and employment opportunities designed to meet the unique needs of that cohort.
9. Provide a vibrant community park with active ballfields, inclusive play areas, and an indoor gymnasium, proximate to existing residents as well as new homeowners.
10. Provide a transit station and stops, allowing easy access to transit for neighborhood residents and visitors and reducing the use of individual automobiles.
11. Create outdoor educational opportunities for various age groups and abilities, which encourage exploration and complement existing programs within the City.
12. Expand the City's existing bikeway and pedestrian trail system and provide important connections to new off-site bikeways and existing public trails.
13. Support existing retailers by avoiding the construction of brick-and-mortar retail and instead providing an eclectic neighborhood retail and entertainment area with opportunities to incorporate a Competitive Integrated Employment (CIE) program for persons living with intellectual or developmental disabilities.
14. Design an environmentally sensitive and sustainable community that features an urban forest throughout the connected trail system and emphasizes the use of rooftop solar electricity to reduce the community's environmental footprint, reduce automobile and water use, and increase tree cover.
15. Create an economically feasible project able to construct the special amenities and features proposed for the neighborhood.

Impacts Identified in the EIR

In addition to attaining the majority of project objectives, reasonable alternatives to the proposed project must be capable of reducing the magnitude of, or avoiding, identified significant environmental impacts of the proposed project. The significant but mitigable and significant and unavoidable impacts identified in the EIR are presented in Table 7-6; the significant and unavoidable impacts identified in the EIR are also presented below.

- ***Aesthetics.*** The EIR determined that the proposed project would result in significant and unavoidable impacts related to substantially degrading the existing visual character or quality of public views of the site and its surroundings. In addition, the EIR determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to substantially degrading the existing visual character or quality of public views of the site and its surroundings associated with development of the proposed project in combination with future buildout of the City of Davis.

- ***Agricultural Resources.*** The EIR determined that the proposed project would result in significant and unavoidable impacts related to the conversion of 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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A, even with implementation of mitigation measures. In addition, even with implementation of mitigation, the EIR determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact

related to involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.

- ***Air Quality, GHG Emissions, and Energy.*** The EIR determined that the proposed project would result in significant and unavoidable impacts related to conflicting with or obstructing implementation of the applicable air quality plan during operation of the proposed project because the reactive organic gases (ROG) emissions would be above the applicable Yolo-Solano Air Quality Management District (YSAQMD) thresholds of significance. Additionally, the EIR determined that, even with implementation of mitigation, the amount of ROG emissions generated by the proposed project would result in a cumulatively considerable and significant and unavoidable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (AAQS). The EIR also determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation.

- ***Noise.*** The EIR determined that, even with the implementation of Mitigation Measure 4.10-1, the proposed project would result in a significant and unavoidable impact related to the generation of a substantial temporary increase in ambient noise levels during construction 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.

- ***Population and Housing.*** The EIR determined that the proposed project would result in a significant and unavoidable impact related to inducing substantial unplanned population growth in an area, either directly or indirectly, because the increase in population resulting from the proposed project would not be within the range of growth projections assumed for the City of Davis. The EIR also concluded that impacts related to cumulative unplanned population growth would be cumulatively considerable and significant and unavoidable.

- ***Transportation.*** The EIR determined that even with implementation of mitigation the proposed project would result in a significant and unavoidable impact related to conflicting or being inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), which is related to VMT. The EIR also determined that the foregoing impact would also be cumulatively considerable and significant and unavoidable. In addition, the EIR determined that the proposed project would result in a cumulatively considerable and significant and unavoidable related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, even with the implementation of mitigation, because the remaining fair share contribution sources enabling the construction of a second westbound through lane and the specific improvements and associated funding sources are not currently known. Finally, the EIR determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to substantially increasing hazards due to geometric design features or incompatible uses (i.e., SR 113 and I-80 freeway off-ramp queueing).

- ***Utilities and Service Systems.*** The EIR determined that the City's WWTP may not have sufficient capacity to treat the proposed project's wastewater. Even with implementation

of mitigation, which consists of the project's payment of fair share fees toward future expansion of the WWTP, the remaining funds necessary to guarantee completion of the upgrades are uncertain, and therefore, the project's impact is considered significant and unavoidable. The EIR also determined that the project in combination with reasonably foreseeable development could result in a significant cumulative impact to the City's WWTP, and the project's incremental contribution would be cumulatively considerable and significant and unavoidable.

7.3 SELECTION OF ALTERNATIVES

The requirement that an EIR evaluate alternatives to the proposed project or alternatives to the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained, while reducing the magnitude of, or avoiding, one or more of the significant environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the CEQA Guidelines require the EIR to "set forth only those alternatives necessary to permit a reasoned choice." As stated in Section 15126.6(a), an EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The CEQA Guidelines provide a definition for "a range of reasonable alternatives" and thus limit the number and type of alternatives that may need to be evaluated in a given EIR. According to the CEQA Guidelines Section 15126.6(f):

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determined could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA Guidelines Section 21061.1, "feasible" is defined as:

> [...] capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Finally, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative."

Alternatives Considered But Dismissed From Further Analysis

Consistent with CEQA, primary consideration was given to alternatives that could reduce significant project impacts, while still meeting most of the basic project objectives.

As stated in Guidelines Section 15126.6(c), among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:

(i) failure to meet most of the basic project objectives,
(ii) infeasibility, or
(iii) inability to avoid significant environmental impacts.

Regarding item (ii), infeasibility, among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional

boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). The aforementioned factors do not establish a fixed limit on the scope of reasonable alternatives.

A Buildout Within City Limits Alternative was considered but dismissed from detailed analysis in this EIR. The reasons for dismissal, within the context of the three above-outlined permissible reasons, are provided below.

Buildout Within City Limits Alternative

The Buildout Within City Limits Alternative would consist of development of the same project components as the proposed project within the City of Davis city limits. Because the City does not contain one contiguous plot of land that is currently undeveloped and would be large enough to accommodate all components of the proposed project, the Buildout Within City Limits Alternative would include development over multiple vacant and underutilized off-site parcels that are located within the City of Davis.

As the project would not be located all on one site, the Buildout Within City Limits Alternative would not be capable of meeting all of the project objectives, and the opportunity for the project to include a variety of benefits would not occur. The Buildout Within City Limits Alternative would not fully meet Project Objectives #9, #10, #11, #12, and #13, in that the proposed community park, transit station, and neighborhood retail uses would not be centralized within one site. In addition, unlike the proposed project, the Alternative may not provide a transit station and bicycle/pedestrian connections where such improvements are currently needed. With respect to the proposed community park, the same acreage and amenities as the proposed project cannot be guaranteed under the Alternative, as the potential off-site parcels within the City Limits may be smaller than the currently proposed park area.

Most importantly, and the primary reason for rejection, is the City's lack of available vacant and underutilized sites to accommodate the proposed project. For example, Table 62, Vacant and Underutilized Sites, City of Davis, September 2023, of the Davis Housing Element, identifies a total residential unit capacity of 242 units for the vacant and underutilized sites within the City.[1] However, as noted, Table 62 does not include the capacity in the Downtown area that was created with the Downtown Davis Specific Plan. Appendix E of the Housing Element identifies a potential build-out capacity for the Downtown Davis Specific Plan area of 780 units. While this would close the gap between the proposed project's 1,250 units and 242 residential unit capacity in Table 62 of the Housing Element, only approximately 80 percent of the total project units could be accommodated.

Overall, the Buildout Within City Limits Alternative would not be considered a feasible alternative to the proposed project and has been dismissed from further evaluation.

Alternatives Considered in this EIR

The following alternatives are considered and evaluated in this section:

- Alternative 1: No Project (No Build) Alternative;
- Alternative 2: Lower Number of Units – Same Footprint Alternative;

[1] City of Davis. *2021-2029 Housing Element, City of Davis*. Adopted December 5, 2023.

- Alternative 3: Same Number of Units – Smaller Footprint Alternative;
- Alternative 4: Same Number of Units – Smallest Footprint Alternative; and
- Alternative 5: Higher Number of Units – Same Footprint Alternative.

Each of the project alternatives is described in detail below, with a corresponding analysis of each alternative's impacts in comparison to the proposed project. As discussed above, reasonable alternatives to the project must be capable of avoiding or substantially lessening one or more of the significant effects of the proposed project. Therefore, this chapter focuses on the resource areas and specific impacts listed above and in Table 7-6 that have been identified in this EIR for the proposed project as requiring mitigation to reduce significant impacts to less than significant, or have been found to remain significant and unavoidable. While an effort has been made to include quantitative data for certain analytical topics, where possible, qualitative comparisons of the various alternatives to the project are primarily provided. Such an approach to the analysis is appropriate as evidenced by CEQA Guidelines Section 15126.6(d), which states that the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

The analysis evaluates impacts that would occur with the alternatives relative to the significant impacts identified for the proposed project. When comparing the potential impacts resulting from implementation of the foregoing alternatives, the following terminology is used:

- "Fewer" = Less than Proposed Project;
- "Similar" = Similar to Proposed Project;
- "Greater" = Greater than Proposed Project; and
- "None" = No impact.

When the term "fewer" is used, the reader should not necessarily equate this to elimination of significant impacts identified for the proposed project. For example, in many cases, an alternative would reduce the relative intensity of a significant impact identified for the proposed project, but the impact would still be expected to remain significant under the alternative, thereby requiring mitigation. In other cases, the use of the term "fewer" may mean the actual elimination of an impact identified for the proposed project altogether. Similarly, use of the term "greater" does not necessarily imply that an alternative would require additional mitigation beyond what has been required for the proposed project. To the extent possible, this analysis will distinguish between the two implications of the comparative words "fewer" and "greater."

See Table 7-6 at the end of this chapter for a comparison of the environmental impacts resulting from the considered alternatives and the proposed project.

Alternative 1: No Project (No Build) Alternative

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6[e]). Analysis of the no project alternative shall:

> "[…] discuss […] existing conditions […] as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (*Id.*, subd. [e][2]) "If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in the property's existing state versus environmental effects that

> would occur if the project were approved. 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. In certain instances, the no project alternative means 'no build,' wherein the existing environmental setting is maintained. However, where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (*Id.*, subd. [e][3][B]).

The Lead Agency has decided to evaluate a No Project (No Build) Alternative, which assumes that the current conditions of the project site would remain, and the site would not be developed. As described in this EIR, the project site consists of generally flat, agricultural land. A drainage course with associated riparian habitat (Channel A) runs east to west through the site, adjacent to the northern private access road, continuing through the Wildhorse Golf Course to the west. Current agricultural operations and cultivation occur within approximately five to 15 feet of Channel A. Existing trees are located along the project frontage adjacent to East Covell Boulevard and along both sides of Channel A. The project site is located outside of the City of Davis City Limits and the City of Davis Sphere of Influence (SOI) and within the unincorporated area of Yolo County. Under the No Project (No Build) Alternative, the existing on-site agricultural operations would be anticipated to continue. As such, under the Alternative, the entire project site is conservatively assumed to be subject to continuous disturbance related to discing, planting, and harvesting. As shown in Table 7-5 at the end of this chapter, the No Project (No Build) Alternative would not meet the majority of the project objectives. Because the No Project (No Build) Alternative would preserve the existing agricultural uses on-site, the Alternative would partially meet Objective #7 related to respecting existing agricultural uses. However, the Alternative would not fully meet Objective #7, as agricultural buffers would not be required.

Aesthetics

The No Project (No Build) Alternative would consist of the continuation of the existing conditions of the project site. Because the No Project (No Build) Alternative would not introduce any new structures or buildings on the site, the Alternative would not alter the existing visual character and quality of public views of the project site. In addition, the creation of new sources of light or glare would not occur, and Mitigation Measures 4.1-3 and 4.1-5 would not be required. Thus, impacts related to Aesthetics would not occur under the No Project (No Build) Alternative. The significant and unavoidable (project-level and cumulative) impact related to Aesthetics would not occur under the No Project (No Build) Alternative.

Agricultural Resources

The No Project (No Build) Alternative would consist of the continuation of the existing conditions of the project site. Pursuant to the California Department of Conservation (DOC) Important Farmland Finder, approximately 192.7 acres of the project site are mapped as Prime Farmland, and approximately 22.5 acres of the project site are mapped as Farmland of Statewide Importance. In addition, the entire project site meets the City of Davis's definition of "agricultural land" and the Yolo LAFCo's definition of Prime Farmland. The No Project (No Build) Alternative would not result in farmland conversion, and thus, agricultural activities would be able to continue to occur. Therefore, the significant and unavoidable impacts related to the conversion of farmland to non-agricultural uses, as well as impacts associated with involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use, would be eliminated under the Alternative.

Overall, impacts related to Agricultural Resources would not occur under the No Project (No Build) Alternative.

Air Quality, GHG Emissions, and Energy

Because the No Project (No Build) Alternative would not involve development of the project site, operational activities anticipated for the proposed project would not occur under the Alternative. Therefore, the Alternative would not result in operational emissions associated with the proposed project that would generate emissions of ROG in exceedance of the YSAQMD's significance thresholds, nor result in a cumulatively considerable and significant and unavoidable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or State AAQS, and Mitigation Measures 4.3-2 and 4.3-6 would not be required. However, the current agricultural operations involve activities that generate dust and result in emissions of criteria air pollutants. For example, emissions from limited agricultural vehicle trips, discing, and harvesting would result in emissions of criteria air pollutants. Due to the low intensity of current operations, such emissions would be much less intensive under the No Project (No Build) Alternative than what could occur under the proposed project. Therefore, while the No Project (No Build) Alternative would result in emissions of air pollutants, any potential impacts associated with such would be substantially less than what is expected for the proposed project.

The existing on-site agricultural operations involve limited activities that result in GHG emissions. However, due to the increase in daily vehicle trips associated with the proposed project, GHG emissions associated with continued operation of the existing on-site agricultural activities would generate substantially less GHG emissions than the proposed project. As such, the potential construction impact related to the generation of GHG emissions that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, would be reduced as compared to the proposed project. Similarly, the cumulatively considerable and significant and unavoidable operational impact identified for the proposed project related to the generation of GHG emissions that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, would be reduced as compared to the proposed project. Thus, the impacts identified for the proposed project related to air quality and GHG emissions would be reduced under the No Project (No Build) Alternative, and Mitigation Measures 4.3-2, 4.3-6, 4.3-7(a), 4.3-7(b), and 4.3-8 would not be required. Overall, the No Project (No Build) Alternative would result in fewer impacts related to Air Quality, GHG Emissions, and Energy as compared to the proposed project.

Biological Resources

Under the No Project (No Build) Alternative, construction of the proposed urban uses would not occur on the project site. However, agricultural operations could continue to occur on-site and it is reasonably anticipated that the agricultural operations could impact protected species, including but not necessarily limited to, Crotch's bumble bee, monarch butterfly, northwestern pond turtle, giant garter snake, and burrowing owl. In addition, unlike the proposed project, the Alternative would not plant new trees within the project site and pesticide use on-site would continue under the Alternative. Nevertheless, the extent of agricultural operations may vary over time, and it is reasonable to conclude that the urban development proposed by the proposed project would have greater impacts to biological resources.

The No Project (No Build) Alternative would not include removal of trees and, thus, would not conflict with the City's Tree Ordinance, and Mitigation Measure 4.4-13 would not be required. In

addition, it is not anticipated that this Alternative would impact valley foothill riparian habitat or Channel A, eliminating the need for Mitigation Measures 4.4-10(a), 4.4-10(b), and 4.4-11(a) through 4.4-11(d). Further, because development of the site would not occur, and agricultural operations are currently allowed on-site, the No Project (No Build) Alternative would not have the potential to conflict with the provisions of the Yolo County HCP/NCCP and would not be subject to Mitigation Measures 4.4-14(a) through 4.4-14(g).

Overall, the proposed project would result in the potential to impact a broader range of protected species; thus, the No Project (No Build) Alternative would result in fewer impacts to Biological Resources as compared to the proposed project.

Cultural and Tribal Cultural Resources

The No Project (No Build) Alternative would consist of the continuation of agricultural operations on the project site, which would involve disturbance of soils through planting, discing, etc. Disturbance of soils through agricultural operations is, in some ways, similar to the construction activities that would occur as part of the proposed project. However, unlike the existing on-site agricultural operations, construction of the proposed project would involve excavation work associated with installation of utility infrastructure, including water and sewer lines. Such excavation work would require a greater depth of disturbance than the agricultural operations. The additional depth of disturbance could increase the likelihood of encountering previously unknown cultural and tribal cultural resources. Nonetheless, the existing on-site agricultural operations would have the potential to cause a substantial adverse change in the significance of an unique archaeological or tribal cultural resource, or disturb human remains. Overall, the No Project (No Build) Alternative would result in fewer impacts related to Cultural and Tribal Resources as compared to the proposed project, and Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through (c) would not be required.

Geology and Soils

Because the No Project (No Build) Alternative would not include grading or other ground-disturbing activities associated with development, impacts related to being located on expansive soil, would not occur. In addition, the Alternative would not have the potential to destroy a unique paleontological resource or site or unique geologic feature. Because development would not occur, Mitigation Measure 4.6-3, requiring preparation and implementation of a final geotechnical engineering report, would not be necessary. Nor would Mitigation Measure 4.6-4 be required, because ground-disturbing activities associated with construction would not occur and any subsurface paleontological resources would not be encountered. Overall, no impacts identified for the proposed project related to Geology and Soils would occur under the No Project (No Build) Alternative.

It is noted that, because the existing on-site agricultural operations would continue under the No Project (No Build) Alternative, such agricultural operations could result in soil erosion and/or the loss of topsoil.

Hazards and Hazardous Materials

The No Project (No Build) Alternative would not include any development; thus, the Alternative would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving on-site irrigation wells. As such, Mitigation Measure 4.7-2 would not be required. Overall, no impacts related to Hazards and Hazardous Materials would occur under the No Project (No Build) Alternative.

Hydrology and Water Quality

The No Project (No Build) Alternative would not alter existing site conditions and, thus, would not have the potential to result in construction or operational impacts related to water quality. Thus, Mitigation Measures 4.8-1 and 4.8-2 would not be required. In addition, because the project site would be undeveloped, the Alternative 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 result in flooding on- or off-site; 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; redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation. As such, Mitigation Measures 4.8-4 and 4.8-5 would not be required. Overall, no impacts related to Hydrology and Water Quality would occur under the No Project (No Build) Alternative.

Noise

Because the No Project (No Build) Alternative would not include any construction activities on-site, the Alternative would not have the potential to result in the generation of a substantial temporary 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. As such, Mitigation Measure 4.10-1 would not be required, and the significant and unavoidable impact identified for the proposed project would not occur. However, for this Alternative, periodic noise would be generated on-site due to ongoing agricultural activities. These limited operational noises are anticipated to be fewer than the operational noise generated by the proposed project. Overall, fewer impacts related to Noise would occur under the No Project (No Build) Alternative.

Population and Housing

Because the No Project (No Build) Alternative would not include any development on-site, the Alternative would not induce substantial unplanned population growth either directly or indirectly, and would not result in cumulative unplanned population growth. Therefore, the significant and unavoidable and cumulatively considerable and significant and unavoidable impacts identified for the proposed project would not occur under the Alternative. Overall, no impacts related to Population and Housing would occur under the No Project (No Build) Alternative.

Transportation

The No Project (No Build) Alternative would not generate construction or operational traffic on local roadways and, thus, would not conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, or related to pedestrian, bicycle, or transit facilities. As such, Mitigation Measures 4.13-1, 4.13-2, 4.13-3, and 4.13-7 would not be required. In addition, because development of the project site would not occur, the cumulatively considerable and significant and unavoidable impacts identified for the proposed project related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, conflicting with CEQA Guidelines Section 15064.3, subdivision (b), and substantially increasing hazards due to a geometric design feature or incompatible uses, would not occur. As such, Mitigation Measures 4.13-3, 4.13-4, 4.13-8(a), 4.13-8(b), 4.13-9, and 4.13-11 would not be required. Overall, impacts related to Transportation would not occur under the No Project (No Build) Alternative.

Nonetheless, it is noteworthy that the bicycle, pedestrian, and transit improvements included in the proposed project would not be constructed under this Alternative.

Utilities and Service Systems

The No Project (No Build) Alternative would not generate wastewater and, thus, would not result in the determination by the wastewater treatment provider (i.e., City of Davis) that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. As such, Mitigation Measure 4.14-3 would not be required and the project's significant and unavoidable impact would not occur. Similarly, this Alternative would not result in a cumulatively considerable incremental contribution toward a significant cumulative WWTP capacity impact.

Alternative 2: Lower Number of Units – Same Footprint Alternative

The Lower Number of Units – Same Footprint Alternative would include a 25 percent reduction in residential units as compared to the proposed project. The Alternative would consist of the development of 937 dwelling units, including 263 Residential Low Density (LDR) units, 451 Residential Medium Density (MDR) units, and 223 Residential High Density (HDR) units, on the same development footprint as the proposed project, resulting in an overall reduction of 313 residential units as compared to the proposed project (see Table 7-1). This Alternative would include a reduction of 315 HDR units as compared to the proposed project, while still retaining the affordable housing parcel located in the southwest corner of the project site (see Figure 7-1).

Table 7-1
Alternative 2: Lower Number of Units – Same Footprint Alternative
Land Use Summary

Land Use Designation	Gross Acres	Net Acres	Units
Residential Low Density	77.1	49.3	263
Residential Medium Density	68.5	43.8	451
Residential High Density	12.0	7.7	223
Subtotal	**157.6**	**100.8**	**937**
Urban Agricultural Transition Area	44.3	44.3	--
Park	12.3	12.3	--
Neighborhood Greenbelt	18.2	18.2	--
Subtotal	**74.8**	**74.8**	**--**
Total	**232.4**	**175.6**	**937**

The Alternative would result in a net residential density of approximately 9.3 dwelling units per acre (du/ac), as compared to the 11.9 du/ac net residential density associated with the proposed project.

Similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would include the development of transit improvements; a daycare facility within the HDR parcel; associated on-site roadway improvements; utility improvements; recreational uses, open space, and greenbelts; and off-site improvements. In addition, similar to the proposed project, the Alternative would reserve land to accommodate a fire station adjacent to East Covell Boulevard.

Figure 7-1
Alternative 2: Lower Number of Units – Same Footprint Alternative

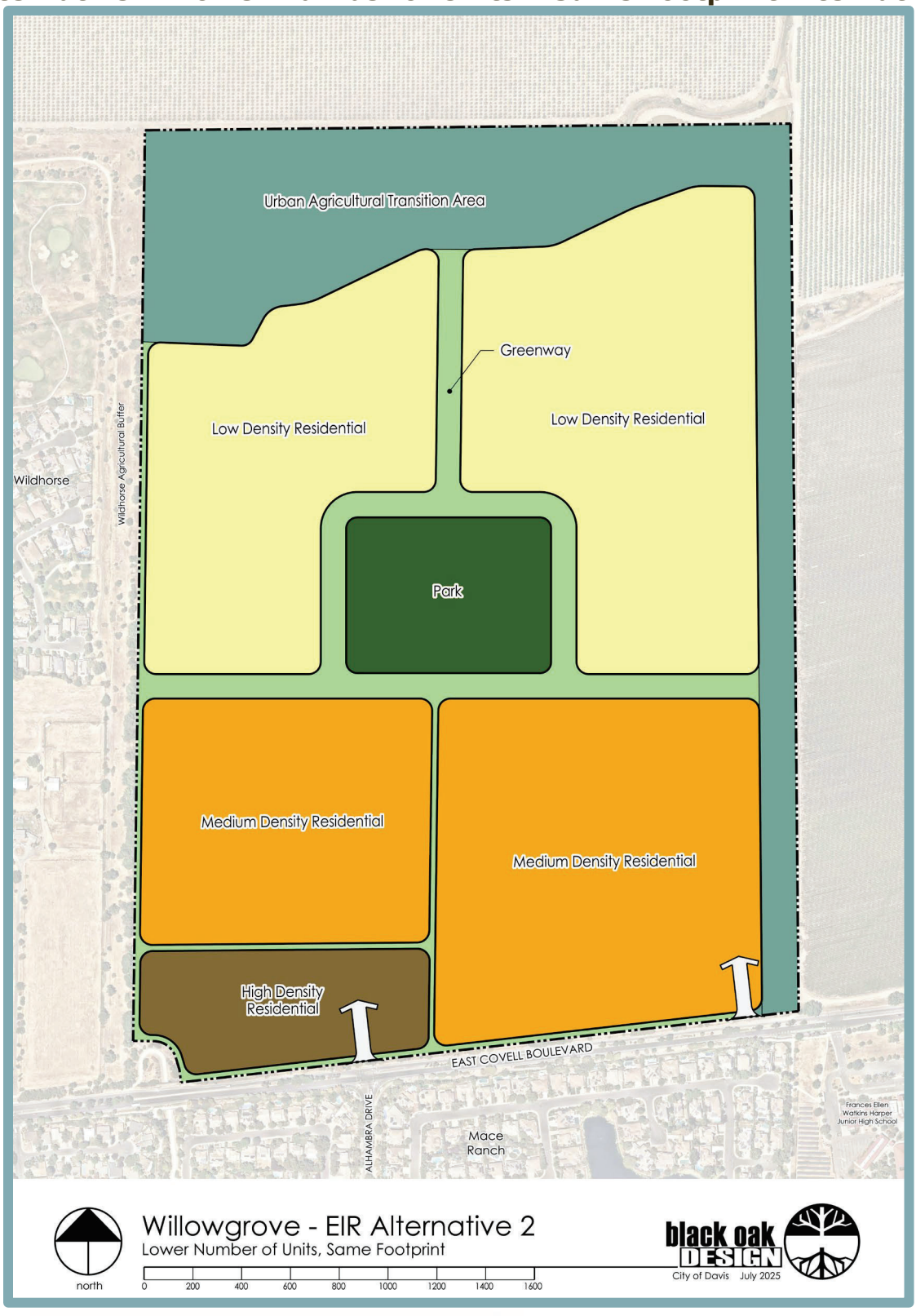


*Figure not OCR compatible.

A goal of the Lower Number of Units – Same Footprint Alternative would be reducing demand on City services, including further minimizing demand on City services related to the proposed community park, although the proposed project does not have a significant impact relative to City services. The proposed project would include a community park intended to serve surrounding communities and residents Citywide with sports fields, a gym/classroom building, neighborhood retail offerings, a dog park, ample parking, and the ability for access to the park without traveling through the project. To further reduce the demand on City services with the Lower Number of Units – Same Footprint Alternative, the park would be moved to the center of project site and would be designed to primarily serve the needs of the project residents as a neighborhood park instead of a community park with amenities designed for the surrounding communities. As a neighborhood park with reduced Citywide amenities, the Lower Number of Units – Same Footprint Alternative would reduce the demands on City park services.

As a neighborhood-serving park with fewer Citywide amenities and the lack of proximity to East Covell Boulevard, the retail uses would also be removed. With the central park intended to serve as a neighborhood park, the proposed northern mini-park would no longer be necessary to serve the project residents and meet the City's walkability standards.

As shown in Table 7-5 at the end of this chapter, the Lower Number of Units – Same Footprint Alternative would not meet Objectives #6, #9, and #13 and would be less successful in meeting Objectives #4 and #5. Nevertheless, because the Lower Number of Units – Same Footprint Alternative would include development of the project site with the same types of uses, the majority of the project objectives would generally be met.

Aesthetics

The Lower Number of Units – Same Footprint Alternative would consist of the development of the project site with similar uses to the proposed project, with the exception of 313 fewer residential units. As such, similar to the proposed project, the Alternative would introduce new structures and buildings on the site that would disrupt the existing panoramic open space/agricultural views available on the project site. Therefore, the Lower Number of Units – Same Footprint Alternative would have a similar potential as the proposed project to alter the existing visual character and quality of public views of the project site, and feasible mitigation still would not exist to reduce the impact to a less-than-significant level.

Thus, the project-specific and cumulative significant and unavoidable impacts related to degradation of the existing visual character and public views of the project site would still occur under the Alternative. In addition, the creation of new sources of substantial light or glare would occur under the Alternative, and Mitigation Measures 4.1-3 and 4.1-5 would be required.

Overall, impacts related to Aesthetics would be similar under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project, including the identified significant and unavoidable impacts.

Agricultural Resources

The Lower Number of Units – Same Footprint Alternative would include development of the project site with similar uses as the proposed project, and would include the same development footprint. Therefore, the Alternative would result in similar significant and unavoidable impacts related to the conversion of farmland to non-agricultural uses, as well as impacts associated with

involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.

Overall, impacts related to Agricultural Resources would be similar under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project, and Mitigation Measures 4.2-1 and 4.2-4 would still be required.

Air Quality, GHG Emissions, and Energy

The Lower Number of Units – Same Footprint Alternative would include development of the project site with similar uses as the proposed project. Although the Alternative would include the development of 313 fewer units than currently proposed, because the development footprint of the Alternative would be the same as the proposed project, potential impacts related to generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction, would be similar to the proposed project, and Mitigation Measures 4.3-7(a) and 4.3-7(b) would still be required.

Because the Lower Number of Units – Same Footprint Alternative would include the development of 313 fewer units than the proposed project, emissions of ROG, as well as emissions of GHGs associated with operation of the Alternative, would be reduced as compared to the proposed project. However, even with the reduction in residential units, operational emissions associated with the Alternative would not significantly decrease. As such, the foregoing impacts would remain significant and unavoidable and/or cumulatively considerable, and implementation of Mitigation Measures 4.3-2, 4.3-6, and 4.3-8 would still be required.

Therefore, while the significant and unavoidable impacts related to Air Quality, GHG Emissions, and Energy would not be avoided under the Lower Number of Units – Same Footprint Alternative, the severity of such impacts would be reduced.

Biological Resources

Although the Lower Number of Units – Same Footprint Alternative would include the development of 313 fewer units than the proposed project, the development footprint would be similar. While fewer units are proposed, the Alternative would include a greater number of single-family units developed at a lower residential density than the development under the proposed project. As such, the residential lots would be larger under the Alternative than the proposed project and would be more spread out, and the entirety of the site currently proposed for development, including the intervening spaces between residential units, would be subject to disturbance. Therefore, similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would result in a similar disturbance of on-site habitat and would have the potential to impact Crotch's bumble bee, monarch butterfly, northwestern pond turtle, giant garter snake, tricolored blackbird, burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, and other birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC). In addition, because the Lower Number of Units – Same Footprint Alternative would result in the same development footprint as the proposed project, including the proposed pedestrian bridge over Channel A and the two new storm water outfalls into the Channel, the impact identified for the proposed project related to having 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, would still occur under the Alternative. Furthermore, because the Lower Number of Units – Same Footprint Alternative

would include the removal of on-site trees and disturbance of riparian habitat, the Alternative would have similar potential to conflict with the City's Tree Ordinance, result in substantial adverse effects on riparian habitat and/or other sensitive natural communities, and conflict with the provisions of the Yolo HCP/NCCP. As such, Mitigation Measures 4.4-2 through 4.4-9, 4.4-10(a), 4.4-10(b), 4.4-11(a) through 4.4-11(c), 4.4-13, 4.4-14(a) through 4.4-14(g), and 4.4-15 would still be required. Therefore, overall impacts to Biological Resources would be similar under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project.

Cultural and Tribal Cultural Resources

The Lower Number of Units – Same Footprint Alternative would result in the development of the same uses as the proposed project, and would include the same development footprint. Similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would result in on- and off-site disturbance to accommodate new development. Therefore, Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through 4.5-4(c) would still apply to the Alternative to mitigate the potentially significant impacts associated with the potential to cause a substantial adverse change in the significance of a unique archaeological or tribal cultural resource, or disturb human remains during construction. Overall, potential impacts related to Cultural and Tribal Cultural Resources would be similar under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project.

Geology and Soils

As noted above, the Lower Number of Units – Same Footprint Alternative would result in the development of the same uses as the proposed project, and would include the same development footprint. However, the Alternative would result in the development of 313 fewer residential units than the proposed project and, thus, would expose a reduced number of individuals to potential geological hazards. Consequently, the potential for the Alternative to result in impacts related to being located on a geological 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, or be located on expansive soil, would be reduced as compared to the proposed project. The Alternative's potential to destroy a unique paleontological resource or site or unique geologic feature would be similar to the proposed project. As such, Mitigation Measures 4.6-3 and 4.6-4 would still be required. Overall, the Lower Number of Units – Same Footprint Alternative would result in fewer impacts related to Geology and Soils as compared to the proposed project.

Hazards and Hazardous Materials

Because the development footprint for the Lower Number of Units – Same Footprint Alternative would be the same as compared to the proposed project, the potential recognized environmental conditions (RECs) identified on the project site would still occur under the Alternative. Thus, similar to the proposed project, the Lower Number of Units – Same Footprint Alternative could 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 related to on-site wells. As such, Mitigation Measure 4.7-2 would still be required. Overall, impacts related to Hazards and Hazardous Materials under the Lower Number of Units – Same Footprint Alternative would be similar to the proposed project.

Hydrology and Water Quality

Given that the Lower Number of Units – Same Footprint Alternative would include the same development footprint as the proposed project, the potential for the Alternative to result in impacts

related to water quality during construction and/or operation would also be the same. Therefore, Mitigation Measures 4.8-1 and 4.8-2 would still be required. In addition, impacts related to substantially altering 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 result in flooding on- or off-site; 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; redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation, would be similar to the proposed project, and Mitigation Measures 4.8-4 and 4.8-5 would still be required. Overall, impacts related to Hydrology and Water Quality under the Lower Number of Units – Same Footprint Alternative would be similar to the proposed project.

Noise

Similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would include the construction of a residential and park uses within the project site. Similar to the proposed project, construction would occur in close proximity to existing residential receptors. As such, the Alternative would have the potential to result in a significant and unavoidable impact related to the generation of a substantial temporary 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, and Mitigation Measure 4.10-1 would still be required. Despite the fact that the Lower Number of Units – Same Footprint Alternative would include the development of 313 fewer units than the proposed project, because the development footprint would be the same, construction activities associated with the Alternative would be of similar duration and intensity as compared to the proposed project, and the impact would remain significant and unavoidable. Therefore, overall impacts related to Noise under the Lower Number of Units – Same Footprint Alternative would be similar to the proposed project.

Population and Housing

Similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would require annexation of the project site into the City of Davis. Because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the Lower Number of Units – Same Footprint Alternative has not been included as part of the City's growth projections. As such, the increase in population resulting from the Lower Number of Units – Same Footprint Alternative would not be within the range of growth projections assumed for the City of Davis. Therefore, similar to the proposed project, the Alternative would be considered to induce substantial unplanned population growth, and a significant and unavoidable and cumulatively considerable and significant and unavoidable impact would occur. However, as stated above, the Lower Number of Units – Same Footprint Alternative includes the development of 313 fewer dwelling units as compared to the proposed project; using the 2.57 persons/household average household size for the City of Davis, the Alternative would house approximately 805 fewer residents than the proposed project. Therefore, while the significant and unavoidable impacts related to Population and Housing would not be avoided under the Lower Number of Units – Same Footprint Alternative, the severity of such impacts would be reduced. Overall, the Lower Number of Units – Same Footprint Alternative would result in fewer impacts related to Population and Housing as compared to the proposed project.

Transportation

As previously discussed, the Lower Number of Units – Same Footprint Alternative would entail development of the project site with the same uses as the proposed project, with the exception

that the Alternative would include 313 fewer dwelling units. Therefore, similar to the proposed project, the Lower Number of Units – Same Footprint Alternative would generate construction traffic on local roadways and, thus, would have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and Mitigation Measure 4.13-1 would still be required.

In addition, while the Alternative would result in 313 fewer dwelling units compared to the proposed project, use of existing transit facilities would be increased as a result of buildout of the Alternative and the Alternative could cause a substantial increase in vehicle travel demand and cause increases to peak evening hour delay on East Covell Boulevard during the evening commute period, thus affecting bus performance and on-time bus arrivals. As such, Mitigation Measure 4.13-3 would still be required under the Alternative. In addition, the cumulatively considerable and significant and unavoidable impact identified for the proposed project related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis would still occur, and implementation of Mitigation Measures 4.13-8(a) and 4.13-8(b) would still be required. Furthermore, because the Alternative would still be required to implement Mitigation Measure 4.13-3, which requires construction of westbound right-turn lanes at the site's two access points on East Covell Boulevard to reduce right-turning traffic and facilitate bus performance through the corridor, construction of the turn lanes under the Alternative would increase conflicts between bicyclists and vehicles. Thus, Mitigation Measures 4.13-2 and 4.13-7 would still be required under the Alternative in order to ensure installation of bicycle and pedestrian safety improvements along East Covell Boulevard. Based on the above, the Lower Number of Units – Same Footprint Alternative would still have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities and services.

According to the Governor's Office of Land Use and Climate Innovation (LCI) (formerly known as the Governor's Office of Planning and Research [OPR]) Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory), one method of reducing residential VMT is to increase residential density. According to Fehr & Peers, increasing the proposed project's residential density from 11.9 to 18.5 dwelling units per net acre would reduce VMT to be below the regional threshold. To meet the City's VMT target, the project's residential density would need to increase from 11.9 to 14.5 dwelling units per net acre. The Lower Number of Units – Same Footprint Alternative would include fewer residential units than the proposed project and, thus, would be built out at a lower residential density as compared to the proposed project. The Alternative would result in a net residential density of approximately 9.3 du/ac. As such, the reduced density under this Alternative would result in increased VMT per capita as compared to the proposed project. Therefore, even with implementation of Mitigation Measures 4.13-4 and 4.13-9, the Alternative would result in a greater impact related to VMT (i.e., conflicting with CEQA Guidelines Section 15064.3, subdivision (b)), and the impact would remain significant and unavoidable.

Lastly, while the Lower Number of Units – Same Footprint Alternative would include the development of 313 fewer units as compared to the proposed project, the Alternative would similarly contribute to freeway off-ramp queuing that spills onto the freeway mainline. Therefore, the changes associated with the Alternative, in combination with future buildout of the City of Davis, could result in hazards due to a geometric design feature or incompatible uses. Mitigation Measure 4.13-11 would still be required, and the impact would remain significant and unavoidable.

Overall, potential impacts related to Transportation would be greater under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project.

Utilities and Service Systems

The Alternative would consist of the development of 937 dwelling units, resulting in an overall reduction of 313 residential units as compared to the proposed project. Using the metrics in the WWTP Capacity Memorandum, this would equate to a reduction in wastewater flow by approximately 46,000 gallons per day, as compared to the proposed project. As a result, this Alternative could have a reduced impact on the City's WWTP capacity, though the impact could still be significant and unavoidable given the recent capacity analysis, suggesting that the WWTP may be at or nearing its capacity. Similarly, this Alternative's incremental contribution to the significant cumulative impact on the City's WWTP capacity could be reduced.

Overall, potential impacts related to Utilities and Service Systems could be fewer under the Lower Number of Units – Same Footprint Alternative as compared to the proposed project.

Alternative 3: Same Number of Units – Smaller Footprint Alternative

The Same Number of Units – Smaller Footprint Alternative would consist of buildout of the same land uses included with the proposed project on a reduced development footprint in order to avoid, to the extent feasible, conversion of on-site high-quality agricultural land with non-agricultural uses, and to reduce residential VMT. The Alternative would include a total of 1,250 units on a 170-acre development footprint, which represents an approximately 27 percent reduction in development area, for a reduction of approximately 62 acres (see Table 7-2 and Figure 7-2).

Table 7-2
Alternative 3: Same Number of Units – Smaller Footprint Alternative Land Use Summary

Land Use Designation	Gross Acres	Net Acres	Units
Residential Low Density	33.1	21.2	148
Residential Medium Density	36.3	23.2	282
Residential High Density	48.1	30.8	820
Subtotal	**117.5**	**75.2**	**1,250**
Urban Agricultural Transition Area	17.6	17.6	--
Park	16.4	16.4	--
Neighborhood Greenbelt	18.5	18.5	--
Subtotal	**52.5**	**52.5**	**--**
Total	**170.0**	**127.7**	**1,250**

The Alternative would result in a net residential density of approximately 16.6 du/ac, as compared to the 11.9 du/ac net residential density associated with the proposed project.

Figure 7-2
Alternative 3: Same Number of Units – Smaller Footprint Alternative



*Figure not OCR compatible.

With the goal of reducing VMT with the Same Number of Units – Smaller Footprint Alternative, the HDR parcels would be located closer to East Covell Boulevard to ensure all higher density apartments are closer to proposed transit stops, consistent with strategies to reduce VMT. To accommodate HDR closer to transit stops, the community park would be located in a central area of the project site. As density increases and project footprint decreases, the amenities and size of the park would also be reduced. The park associated with the Alternative would be focused on neighborhood amenities to reduce travel through the project site by non-resident park visitors. In addition, the Alternative would not include neighborhood retail in order to accommodate higher density residential uses on a smaller development footprint and due to the lack of proximity to East Covell Boulevard. Similar to the proposed project, the Alternative would reserve land to accommodate a fire station facility adjacent to East Covell Boulevard.

Under the Alternative, the UATA would be reduced to a minimum and additional trees within the urban forest north of Channel A would not be planted. Channel A would be completely avoided, but existing agricultural operations around Channel A could continue. The landscape buffer along East Covell Boulevard would be reduced in order to accommodate additional units and a sound wall. The Alternative would not include a connection to the existing off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail), and connections to the trail within the adjacent Wildhorse Agricultural Buffer would be reduced. The overall trail and bikeway system would be reduced in order to accommodate the increased residential density.

As shown in Table 7-5 at the end of this chapter, the Same Number of Units – Smaller Footprint Alternative would fully meet Objectives #6, #7, #8, #10, and #11. However, for reasons outlined in Table 7-5, the Alternative would not meet Objectives #9, #13, or #14 and would be less successful in meeting the remaining project objectives.

Aesthetics

The Same Number of Units – Smaller Footprint Alternative would result in the development of similar uses to the proposed project on a 170-acre development footprint. In order to achieve the increased residential density, the mix of residential product types would need to be adjusted. This would result in an increase in the amount of multi-family housing along East Covell Boulevard and could result in the number of stories of each multi-family structure being increased from two and three stories anticipated under the proposed project, to three and four stories under the Same Number of Units – Smaller Footprint Alternative. The Alternative is anticipated to require three-story garden style buildings along East Covell Boulevard. Parking would be provided at a 1:1 ratio, and limited outdoor space would be provided. Although the Alternative would introduce new structures and buildings on the site that would disrupt the existing panoramic open space/agricultural views available on the project site, a reduced amount of agricultural land would be converted to urban uses under the Same Number of Units – Smaller Footprint Alternative. Therefore, although the project-specific and cumulative significant and unavoidable impacts related to degradation of the existing visual character and public views of the project site would still occur under the Alternative, the severity of such impacts would be reduced. In addition, the creation of new sources of substantial light or glare would occur under the Alternative, and Mitigation Measures 4.1-3 and 4.1-5 would be required. Overall, impacts related to Aesthetics would be fewer under the Same Number of Units – Smaller Footprint Alternative as compared to the proposed project due to the reduction in development area by approximately 62 acres.

Agricultural Resources

As discussed above, although the Same Number of Units – Smaller Footprint Alternative would involve the development of similar uses as the proposed project, the Alternative would be designed to avoid the development of approximately 62 acres of agricultural land in the northern portion of the project site. The entire 170-acre development footprint under the Alternative is designated as Prime Farmland (see Figure 7-3). In comparison, the proposed project would convert approximately 215.2 acres of Prime Farmland and Farmland of Statewide Importance (Farmland), which equates to approximately 26.6 percent more Farmland conversion than the Alternative.

Therefore, although the Same Number of Units – Smaller Footprint Alternative would result in significant and unavoidable impacts related to the conversion of farmland to non-agricultural uses, as well as impacts associated with involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use, because a greater amount of Farmland would be preserved under the Alternative than under the proposed project, the severity of the aforementioned significant and unavoidable impacts would be reduced under the Same Number of Units – Smaller Footprint Alternative.

Notwithstanding the above, it is important to note that productive farming of the 62-acre agricultural avoidance area may prove difficult given that the area would be surrounded by new residential receptors. Agricultural operations can generate noise and dust from equipment operations, and should residents file nuisance complaints with the City, the ability to successfully farm the agricultural avoidance area on an ongoing basis may be comprised and ultimately rendered infeasible.

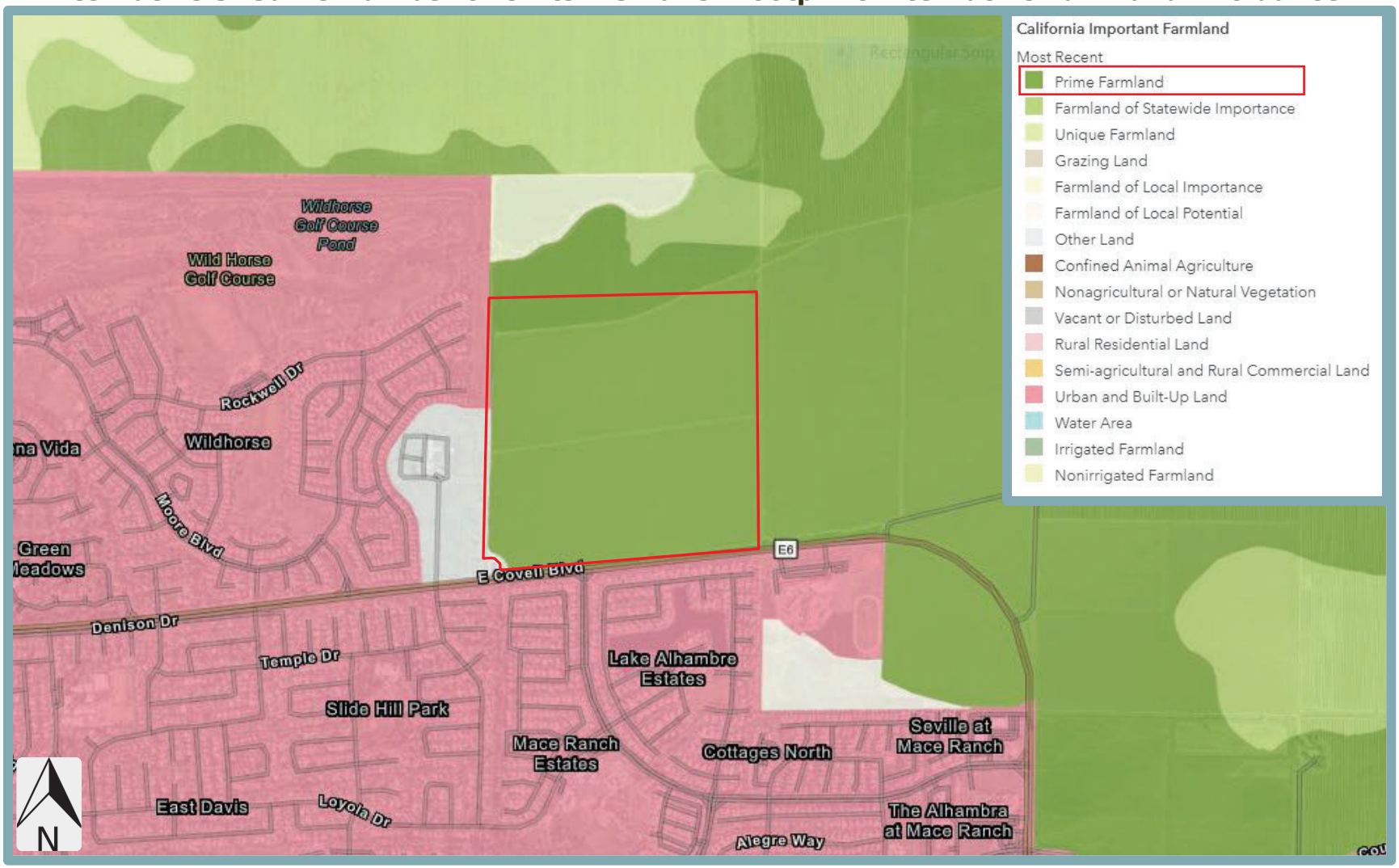
Overall, the Same Number of Units – Smaller Footprint Alternative would result in fewer impacts related to Agricultural Resources as compared to the proposed project, and Mitigation Measures 4.2-1 and 4.2-4 would still be required.

Air Quality, GHG Emissions, and Energy

The Same Number of Units – Smaller Footprint Alternative would include development of similar uses to the proposed project. The Alternative would include a smaller development footprint than the proposed project, reduced park amenities, and would not include neighborhood retail uses. While potential impacts related to generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction would be reduced under the Alternative as compared to the proposed project due to the reduced development footprint, Mitigation Measures 4.3-7(a) and 4.3-7(b) would still be required.

As previously discussed, the EIR determined that the proposed project would result in significant and unavoidable impacts related to conflicting with or obstructing implementation of the applicable air quality plan during operation of the proposed project because the ROG emissions would be above the applicable YSAQMD thresholds of significance. Additionally, the EIR determined that, even with implementation of mitigation, the amount of ROG emissions generated by the proposed project would result in a cumulatively considerable and significant and unavoidable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or State AAQS.

Figure 7-3
Alternative 3: Same Number of Units – Smaller Footprint Alternative Farmland Avoidance



Note: Site boundaries are approximate.
Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2025.

The EIR also determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation.

In their Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity,[2] the California Air Pollution Control Officers Association (CAPCOA) sets forth VMT reduction strategies. As stated therein, most CAPCOA VMT reduction strategies also reduce GHG emissions and criteria pollutants, considered co-benefits, by reducing the source metric of VMT (i.e., vehicle ownership, number of vehicle trips, and trip distance). As discussed in further detail under the Transportation discussion, the Same Number of Units – Smaller Footprint Alternative would result in a reduction in residential VMT per capita as compared to the proposed project due to the increased residential density. The reduction in VMT associated with the Alternative would result in a proportional reduction in mobile source emissions. The reduction in GHG emissions was calculated using the following CAPCOA formula for Strategy T-1 (Increase Residential Density):

> Percent reduction in GHG emissions from project VMT in study area = [(Residential density of project development – 9.1) / 9.1] * -0.22

As such, unmitigated operational GHG emissions would be reduced by an estimated 18.1 percent from 10,210 metric tons of CO_2 equivalents per year ($MTCO_2e$/yr) to 8,362 $MTCO_2e$/yr under the Same Number of Units – Smaller Footprint Alternative. However, even with such a reduction, the Alternative could still result in GHG emissions that could exceed net carbon neutrality in the year 2040, and, thus, implementation of the Same Number of Units – Smaller Footprint Alternative would conflict with the City's adopted goal of carbon neutrality by the year 2040. Therefore, the foregoing impact would remain significant and unavoidable and cumulatively considerable, even with implementation of Mitigation Measure 4.3-8. Nonetheless, the severity of the foregoing impact would be reduced under the Same Number of Units – Smaller Footprint Alternative as compared to the proposed project.

In addition, according to the CAPCOA Handbook, the percentage reduction in ROG emissions associated with reduction in VMT can be calculated with the following formula:[3]

> Percent reduction in ROG emissions = Percent reduction in GHG * 87 percent

Using the above formula, the reduction in VMT under the Alternative would result in a 15.77 percent reduction in ROG emissions, for a reduction from 14.5 tons per year (tons/yr) associated with the proposed project to approximately 12.2 tons/yr, which would still be above the YSAQMD significance threshold of 10 tons/yr. As such, the foregoing impacts related to criteria pollutant emissions would remain significant and unavoidable and/or cumulatively considerable, and implementation of Mitigation Measures 4.3-2 and 4.3-6 would still be required.

Overall, the Same Number of Units – Smaller Footprint Alternative would result in fewer impacts related to Air Quality, GHG Emissions, and Energy as compared to the proposed project.

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2 California Air Pollution Control Officers Association. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. December 2021.

3 California Air Pollution Control Officers Association. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* [pg. 63]. December 2021.

Biological Resources

Because the Same Number of Units – Smaller Footprint Alternative would include less ground-disturbing activities on the project site and would include a reduction in development area of approximately 62 acres, the Alternative would have a reduced potential to impact Crotch's bumble bee, monarch butterfly, burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, and other birds protected under the MBTA and CFGC as compared to the proposed project. Nonetheless, Mitigation Measures 4.4-2, 4.4-3, 4.4-7, 4.4-8, 4.4-9, 4 and 4.4-15 would still be required. However, because the Alternative would not result in impacts to the riparian habitat located along Channel A, the Alternative would not impact northwestern pond turtle, giant garter snake, or tricolored blackbird, and Mitigation Measures 4.4-4 through 4.4-6 would not be required. The Alternative would have a similar potential to conflict with the provisions of the Yolo HCP/NCCP, and Mitigation Measures 4-14(a) through 4.4-14(g) would still be required. In addition, while the Alternative would result in the removal of fewer trees as compared to the proposed project, the Alternative would still be required to comply with the applicable provisions of Davis Municipal Code Chapter 37, and Mitigation Measure 4.4-13 would still be required.

Because the Same Number of Units – Smaller Footprint Alternative would result in a reduced development footprint as compared to the proposed project, the Alternative would avoid the riparian habitat located along Channel A within the project site. Thus, impacts to riparian resources would be fewer under the Same Number of Units – Smaller Footprint Alternative as compared to the proposed project, and Mitigation Measures 4.4-10(a) and 4.4-10(b) would not be required. Similarly, because the Alternative would not require installation of a pedestrian bridge over Channel A or storm water outfalls into Channel A, the Alternative would not result in impacts to riverine habitat, and Mitigation Measures 4.4-11(a) through 4.4-11(d) would not be required.

Overall, the Same Number of Units – Smaller Footprint Alternative would result in fewer impacts related to Biological Resources as compared to the proposed project.

Cultural and Tribal Cultural Resources

The Same Number of Units – Smaller Footprint Alternative would include development of the project site with similar uses to the proposed project. Because the development footprint would be reduced under the Alternative, the potential for development of the Same Number of Units – Smaller Footprint Alternative to encounter previously unrecorded archaeological or tribal cultural resources or disturb human remains during construction would be reduced as compared to the proposed project. Nonetheless, Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through 4.5-4(c) would still be required. Overall, the Same Number of Units – Smaller Footprint Alternative would result in fewer impacts related to Cultural and Tribal Cultural Resources as compared to the proposed project due to the reduced development footprint.

Geology and Soils

As noted above, the Same Number of Units – Smaller Footprint Alternative would include a smaller overall area of disturbance compared to the proposed project while including the same number of residential units. As such, the same number of occupants would be subject to potential impacts related to being located on a geological 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, or be located on expansive soil, and impacts related to such would be similar as compared to the proposed project. Similar to the discussion related to cultural and tribal cultural resources above, due to the reduced development footprint of the Same Number of Units – Smaller Footprint Alternative, the Alternative's potential to destroy



a unique paleontological resource or site or unique geologic feature would be reduced as compared to the proposed project. Nonetheless, Mitigation Measures 4.6-3 and 4.6-4 would still be required. Overall, the Same Number of Units – Smaller Footprint Alternative would result in fewer impacts related to Geology and Soils as compared to the proposed project.

Hazards and Hazardous Materials

Although the overall disturbance area for the Same Number of Units – Smaller Footprint Alternative would be decreased as compared to the proposed project, the Alternative would not avoid the on-site wells. Thus, similar to the proposed project, the Same Number of Units – Smaller Footprint Alternative could 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 related to on-site wells. As such, Mitigation Measure 4.7-2 would still be required. Overall, impacts related to Hazards and Hazardous Materials under the Same Number of Units – Smaller Footprint Alternative would be similar to the proposed project.

Hydrology and Water Quality

Given that the Same Number of Units – Smaller Footprint Alternative would include a smaller overall area of disturbance compared to the proposed project, the potential for the Alternative to result in construction or operational impacts related to water quality would be decreased. Nonetheless, Mitigation Measures 4.8-1 and 4.8-2 would still be required to ensure that impacts to water quality during project construction and operation would not occur. Similarly, although Mitigation Measures 4.8-4 and 4.8-5 would still be required, due to the smaller development footprint associated with the Same Number of Units – Smaller Footprint Alternative, impacts related to substantially altering 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 result in flooding on- or off-site; 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; redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation, would be reduced as compared to the proposed project. Overall, impacts related to Hydrology and Water Quality under the Same Number of Units – Smaller Footprint Alternative would be fewer than the proposed project.

Noise

Similar to the proposed project, the Same Number of Units – Smaller Footprint Alternative would include the construction of residential and park uses within the project site. Similar to the proposed project, construction would occur in close proximity to existing residential receptors to the west of the project site. As such, the Alternative would have the potential to result in a significant and unavoidable impact related to the generation of a substantial temporary 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, and Mitigation Measure 4.10-1 would still be required. Despite the fact that the Same Number of Units – Smaller Footprint Alternative would not include development in the northern portion of the site, construction activities associated with the Alternative would be of similar duration and intensity as compared to the proposed project, and the impact would remain significant and unavoidable. Therefore, overall impacts related to Noise under the Same Number of Units – Smaller Footprint Alternative would be similar to the proposed project.

Population and Housing

Similar to the proposed project, the Same Number of Units – Smaller Footprint Alternative would require annexation of the project site into the City of Davis. Because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the Same Number of Units – Smaller Footprint Alternative has not been included as part of the City's growth projections. Similar to the proposed project, the Same Number of Units – Smaller Footprint Alternative would include the development of 1,250 residential units and would house approximately 3,213 future residents. As such, the increase in population resulting from the Same Number of Units – Smaller Footprint Alternative would not be within the range of growth projections assumed for the City of Davis. Therefore, similar to the proposed project, the Alternative would be considered to induce substantial unplanned population growth, and a significant and unavoidable and cumulatively considerable and significant and unavoidable impact would occur. Therefore, overall impacts related to Population and Housing under the Same Number of Units – Smaller Footprint Alternative would be similar to the proposed project.

Transportation

As previously discussed, the Same Number of Units – Smaller Footprint Alternative would entail development of the project site with similar uses as the proposed project on a smaller development footprint. Therefore, similar to the proposed project, the Same Number of Units – Smaller Footprint Alternative would generate construction traffic on local roadways and, thus, would have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and Mitigation Measure 4.13-1 would still be required.

In addition, because development of the project site would be similar to the proposed project under the Alternative, use of existing transit facilities would be increased as a result of buildout of the Alternative and the Alternative would cause a substantial increase in vehicle travel demand and cause increases to peak evening hour delay on East Covell Boulevard during the evening commute period, thus affecting bus performance and on-time bus arrivals. As such, Mitigation Measure 4.13-3 would still be required under the Alternative. In addition, the cumulatively considerable and significant and unavoidable impact identified for the proposed project related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis would still occur, and implementation of Mitigation Measures 4.13-8(a) and 4.13-8(b) would still be required. Furthermore, because the Alternative would still be required to implement Mitigation Measure 4.13-3, which requires construction of westbound right-turn lanes at the site's two access points on East Covell Boulevard to reduce right-turning traffic and facilitate bus performance through the corridor, construction of the turn lanes under the Alternative would increase conflicts between bicyclists and vehicles. Thus, Mitigation Measures 4.13-2 and 4.13-7 would still be required under the Alternative in order to ensure installation of bicycle and pedestrian improvements along East Covell Boulevard. Based on the above, the Same Number of Units – Smaller Footprint Alternative would still have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities and services.

As discussed in Chapter 4.13, Transportation, of this EIR, a significant VMT impact would occur if residential VMT per capita exceeds 15 percent below either the baseline City average or regional average VMT per capita for residential uses (i.e., 25.6 and 18.4 VMT per capita, respectively). According to Fehr & Peers, increasing the proposed project's residential density



from 11.9 to 18.5 units per net acre would reduce VMT to be below the regional threshold. To meet the City's VMT target, the project's residential density would need to increase from 11.9 to 14.5 units per net acre. The Same Number of Units – Smaller Footprint Alternative would include development of 282 additional HDR units than the proposed project on a reduced development footprint. Therefore, the net residential density of the Alternative would be increased to approximately 16.6 du/ac, as compared to a net residential density of approximately 11.9 du/ac under the proposed project. As such, the Same Number of Units – Smaller Footprint Alternative would reduce VMT per capita to below the City's VMT threshold but would not reduce residential VMT to below the regional threshold. In order to reduce VMT to below the regional threshold, the Alternative would be required to include an additional 150 HDR units, for a total of 1,400 dwelling units. Therefore, while the Alternative would reduce residential VMT as compared to the proposed project, even with implementation of Mitigation Measures 4.13-4 and 4.13-9, the Same Number of Units – Smaller Footprint Alternative would still result in a significant and unavoidable and cumulatively considerable and significant and unavoidable impact related to VMT (i.e., conflicting with CEQA Guidelines Section 15064.3, subdivision (b)).

Lastly, because the Same Number of Units – Smaller Footprint Alternative would include the development of the same number of units as the proposed project, the Alternative would similarly contribute to freeway off-ramp queuing that spills onto the freeway mainline. Therefore, changes associated with the Alternative, in combination with future buildout of the City of Davis, could result in hazards due to a geometric design feature or incompatible uses. Mitigation Measure 4.13-11 would still be required, and the impact would remain significant and unavoidable.

Overall, potential impacts related to Transportation would be fewer under the Same Number of Units – Smaller Footprint Alternative as compared to the proposed project.

Utilities and Service Systems

The Alternative would consist of the same number of dwelling units as the proposed project, and thus, generate an equivalent amount of wastewater. Given the recent capacity analysis, suggesting that the WWTP may be at or nearing its capacity, this Alternative, similar to the proposed project, could have a significant and unavoidable impact to the City's WWTP capacity. Similarly, this Alternative's incremental contribution to the significant cumulative impact on the City's WWTP capacity would be the same.

Overall, potential impacts related to Utilities and Service Systems could be similar under the Same Number of Units – Smaller Footprint Alternative as compared to the proposed project.

Alternative 4: Same Number of Units – Smallest Footprint Alternative

The Same Number of Units – Smallest Footprint Alternative would consist of buildout of HDR uses on a reduced development footprint in order to further avoid, to the extent feasible, conversion of on-site high-quality agricultural land with non-agricultural uses, and to further reduce residential VMT. The Alternative would include a total of 1,250 units on a 100-acre development footprint, which represents an approximately 57 percent reduction in development area, for a reduction of approximately 132 acres (see Table 7-3 and Figure 7-4).

Table 7-3
Alternative 4: Same Number of Units – Smallest Footprint
Alternative Land Use Summary

Land Use Designation	Gross Acres	Net Acres	Units
Residential High Density	57.7	36.9	1,250
Subtotal	**57.7**	**36.9**	**1,250**
Urban Agricultural Transition Area	13.8	13.8	--
Park	16.4	16.4	--
Neighborhood Greenbelt	12.1	12.1	--
Subtotal	**42.3**	**42.3**	**--**
Total	**100.0**	**79.2**	**1,250**

With the goal of reducing VMT with the Same Number of Units – Smallest Footprint Alternative, the HDR parcels would be located closer to East Covell Boulevard to ensure all higher density apartments are closer to proposed transit stops, consistent with strategies to reduce VMT. To accommodate HDR closer to transit stops, the community park would be located in the northeastern portion of the project site.

As density increases and project footprint decreases, the amenities and size of the park would also be reduced. The park associated with the Alternative would be focused on neighborhood amenities to reduce travel through the project site by non-resident park visitors. In addition, the Alternative would not include neighborhood retail or the proposed daycare in order to accommodate higher density residential uses on a smaller development footprint and due to the lack of proximity to East Covell Boulevard. Similar to the proposed project, the Alternative would reserve land to accommodate a fire station facility adjacent to East Covell Boulevard.

To accommodate the same number of units on the smallest possible development footprint, the Same Number of Units – Smallest Footprint Alternative would only provide HDR units. To accommodate 1,250 units on the reduced development footprint, six-story double-loaded corridor buildings with multiple four-story buildings, which would consist entirely of apartments, not ownership condominiums, would be required. As such, the Alternative is less likely to provide more attainable homeownership opportunities for the “missing middle” and young families that desire single-family units with private yards. The loss of MDR and LDR uses would significantly reduce student yields even though the total unit count would remain the same as the proposed project.

Under the Alternative, the UATA would be reduced to a minimum and additional trees within the proposed urban forest north of Channel A would not be planted; Channel A would be completely avoided.

Furthermore, the landscape buffer along East Covell Boulevard would be reduced in order to accommodate additional units and a sound wall. The Alternative would not include a connection to the existing off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail), and connections to the trail within the adjacent Wildhorse Agricultural buffer would be reduced.

Figure 7-4
Alternative 4: Same Number of Units – Smallest Footprint Alternative



*Figure not OCR compatible.

Overall, the proposed trail and bikeway system would be reduced in order to accommodate the increased residential density.

As shown in Table 7-5 at the end of this chapter, the Same Number of Units – Smallest Footprint Alternative would fully meet Objectives #6, #7, #8, #10, and #11. However, for reasons outlined in Table 7-5, the Alternative would not meet Objectives #9, #13, and #14, and would be less successful in meeting the remaining project objectives.

Aesthetics

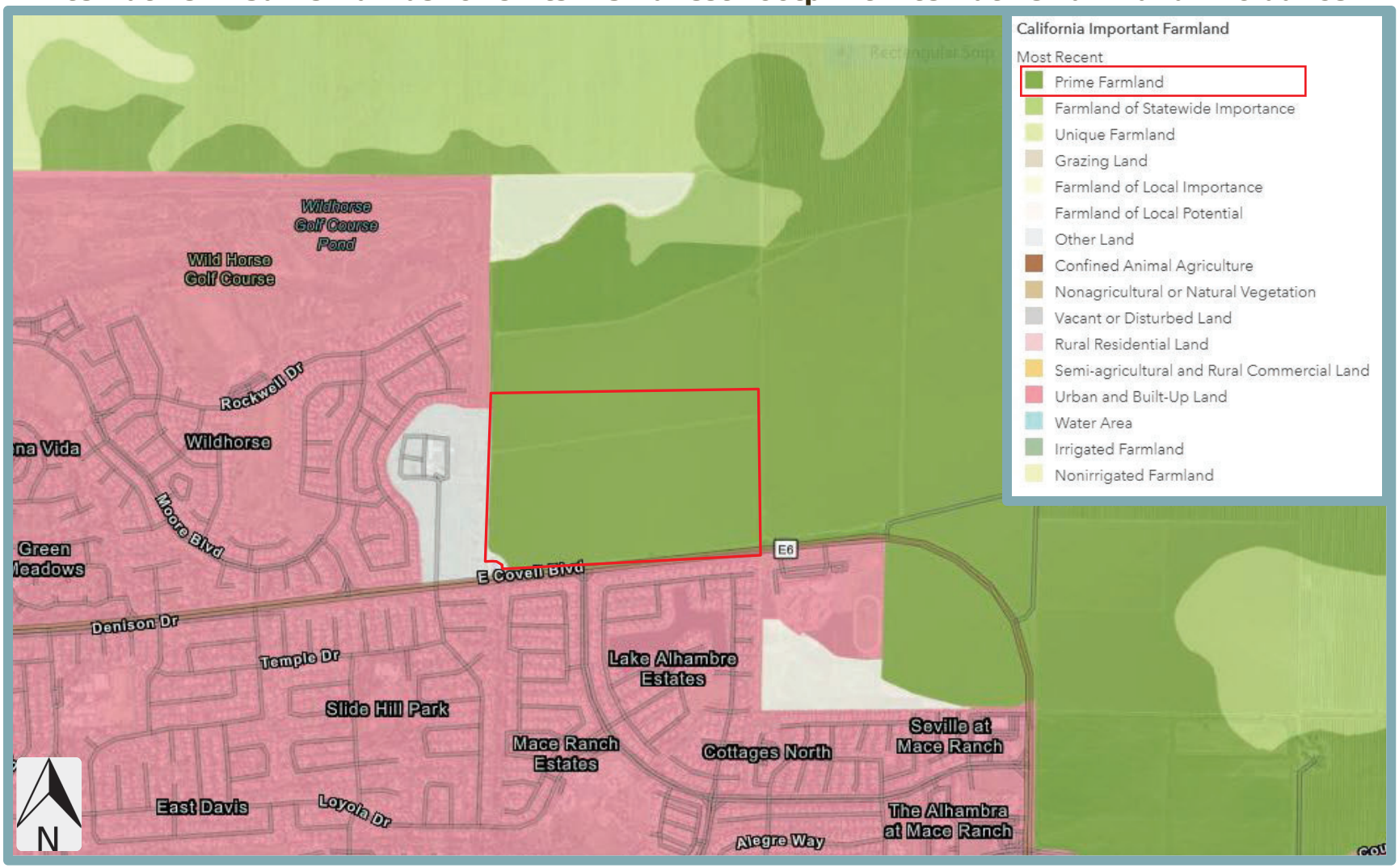
The Same Number of Units – Smallest Footprint Alternative would result in the development of HDR and park uses on a 100-acre development footprint. In order to achieve the increased residential density, the mix of residential product types would need to be adjusted. This would result in an increase in the amount of multi-family housing along East Covell Boulevard and the number of stories of each multi-family structure. The Alternative is anticipated to require a six-story double-loaded corridor buildings, multiple four-story buildings, and garden style buildings, which would be substantially taller, larger, and more numerous than the proposed project. Parking would be provided at less than a 1:1 ratio, and limited outdoor space would be provided. In contrast, the proposed project would include two- and three-story HDR buildings, with the possibility for a maximum of three and four stories. Although approximately 132 fewer acres of agricultural land would be converted to urban uses under the Same Number of Units – Smallest Footprint Alternative, the analysis of aesthetic impacts is focused on public views. Because the six-story buildings along East Covell Boulevard would block the views of the northerly portion of the site, which would remain as agricultural land, the inclusion of six-story residential buildings would result in more severe impacts related to substantially degrading the existing visual character or quality of public views of the site and its surroundings. In addition, the creation of new sources of substantial light or glare would occur under the Alternative, and Mitigation Measures 4.1-3 and 4.1-5 would be required. Overall, impacts related to Aesthetics would be greater under the Same Number of Units – Smallest Footprint Alternative as compared to the proposed project.

Agricultural Resources

As discussed above, although the Same Number of Units – Smallest Footprint Alternative would be designed to avoid the development of approximately 132 acres of agricultural land in the northern portion of the project site, the entire 100-acre development footprint under the Alternative is designated as Prime Farmland (see Figure 7-5). In comparison, the proposed project would convert approximately 215.2 acres of Prime Farmland and Farmland of Statewide Importance (Farmland), which equates to approximately 115 percent more Farmland conversion than the Alternative.

Therefore, although the Same Number of Units – Smallest Footprint Alternative would result in significant and unavoidable impacts related to the conversion of farmland to non-agricultural uses, as well as impacts associated with involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use, because a greater amount of Farmland would be preserved under the Alternative than under the proposed project, the severity of the aforementioned significant and unavoidable impacts would be reduced under the Same Number of Units – Smallest Footprint Alternative.

Figure 7-5
Alternative 4: Same Number of Units – Smallest Footprint Alternative Farmland Avoidance



Note: Site boundaries are approximate.
Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2025.

Notwithstanding the above, it is important to note that productive farming of the 132-acre agricultural area may prove difficult given that the area would be surrounded by new (on-site) residential receptors. Agricultural operations can generate noise and dust from equipment operations, and should residents file nuisance complaints with the City, the ability to successfully farm the agricultural area on an ongoing basis may be comprised and ultimately rendered infeasible.

Overall, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts related to Agricultural Resources as compared to the proposed project, and Mitigation Measures 4.2-1 and 4.2-4 would still be required.

Air Quality, GHG Emissions, and Energy

The Same Number of Units – Smallest Footprint Alternative would include development of the project site with HDR and park uses. The Alternative would include a significantly reduced development footprint as compared to the proposed project, reduced park amenities, and would not include neighborhood retail uses. While potential impacts related to generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction would be reduced under the Alternative as compared to the proposed project due to the reduced development footprint, Mitigation Measures 4.3-7(a) and 4.3-7(b) would still be required.

As previously discussed, the EIR determined that the proposed project would result in significant and unavoidable impacts related to conflicting with or obstructing implementation of the applicable air quality plan during operation of the proposed project because the ROG emissions would be above the applicable YSAQMD thresholds of significance. Additionally, the EIR determined that, even with implementation of mitigation, the amount of ROG emissions generated by the proposed project would result in a cumulatively considerable and significant and unavoidable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or State AAQS. The EIR also determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation.

As discussed above, in their Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity,[4] the CAPCOA sets forth VMT reduction strategies. As stated therein, most CAPCOA VMT reduction strategies also reduce GHG emissions and criteria pollutants, considered co-benefits, by reducing the source metric of VMT (i.e., vehicle ownership, number of vehicle trips, and trip distance). As discussed in further detail under the Transportation discussion, the Same Number of Units – Smallest Footprint Alternative would result in a significant reduction in residential VMT per capita as compared to the proposed project, and would avoid the significant and unavoidable impacts related to such. The reduction in VMT associated with the Alternative would result in a proportional reduction in mobile source emissions. Using the CAPCOA formula for Strategy T-1 (Increase Residential Density), the GHG percent reduction was calculated for the Alternative. The unmitigated operational GHG emissions would be reduced by an estimated 59.7 percent from 10,210

[4] California Air Pollution Control Officers Association. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. December 2021.

$MTCO_2e$/yr to 4,115 $MTCO_2e$/yr under the Same Number of Units – Smallest Footprint Alternative. However, even with such a reduction, the Alternative could still result in GHG emissions that could exceed net carbon neutrality in the year 2040, and, thus, implementation of the Same Number of Units – Smallest Footprint Alternative would conflict with the City's adopted goal of carbon neutrality by the year 2040. Therefore, the foregoing impact would remain significant and unavoidable and cumulatively considerable, even with implementation of Mitigation Measure 4.3-8. Nonetheless, the severity of the foregoing impact would be reduced under the Same Number of Units – Smallest Footprint Alternative as compared to the proposed project.

Using the CAPCOA Handbook formula for percent reduction in ROG emissions, the reduction in VMT under the Alternative would result in a 51.9 percent reduction in ROG emissions, for a reduction from 14.5 tons/yr associated with the proposed project to approximately 6.9 tons/yr, which would be below the YSAQMD significance threshold of 10 tons/yr. As such, the foregoing impacts related to criteria pollutant emissions would be reduced to less than significant and/or less than cumulatively considerable, and implementation of Mitigation Measures 4.3-2 and 4.3-6 would not be required.

Overall, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts related to Air Quality, GHG Emissions, and Energy as compared to the proposed project.

Biological Resources

Because the Same Number of Units – Smallest Footprint Alternative would include less ground-disturbing activities on the project site and a reduction in development area of approximately 132 acres, as well as reduced pedestrian connections to the Wildhorse Agricultural Buffer, the Alternative would have a reduced potential to impact Crotch's bumble bee, monarch butterfly, burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, and other birds protected under the MBTA and CFGC. Nonetheless, Mitigation Measures 4.4-2, 4.4-3, 4.4-7, 4.4-8, 4.4-9, 4 and 4.4-15 would still be required. However, because the Alternative would not result in impacts to the riparian habitat located along Channel A, the Alternative would not impact northwestern pond turtle, giant garter snake, or tricolored blackbird, and Mitigation Measures 4.4-4 through 4.4-6 would not be required. The Alternative would have a similar potential to conflict with the provisions of the Yolo HCP/NCCP, and Mitigation Measures 4-14(a) through 4.4-14(g) would still be required. In addition, while the Alternative would result in the removal of fewer trees as compared to the proposed project, the Alternative would still be required to comply with the applicable provisions of Davis Municipal Code Chapter 37, and Mitigation Measure 4.4-13 would still be required.

Because the Same Number of Units – Smallest Footprint Alternative would result in a 132-acre smaller development footprint as compared to the proposed project, the Alternative would avoid the riparian habitat located along Channel A within the project site. Thus, impacts to riparian resources would be fewer under the Same Number of Units – Smallest Footprint Alternative as compared to the proposed project, and Mitigation Measures 4.4-10(a) and 4.4-10(b) would not be required. Similarly, because the Alternative would not require installation of a pedestrian bridge over Channel A or storm water outfalls into Channel A, the Alternative would not result in impacts to riverine habitat, and Mitigation Measures 4.4-11(a) through 4.4-11(d) would not be required.

Overall, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts related to Biological Resources as compared to the proposed project.

Cultural and Tribal Cultural Resources

The Same Number of Units – Smallest Footprint Alternative would include development of the project site with HDR and park uses. Because the development footprint would be reduced under the Alternative by 132 acres, the potential for development of the Same Number of Units – Smallest Footprint Alternative to encounter previously unrecorded archaeological or tribal cultural resources or disturb human remains during construction would be reduced as compared to the proposed project. Nonetheless, Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through 4.5-4(c) would still be required. Overall, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts related to Cultural and Tribal Cultural Resources as compared to the proposed project.

Geology and Soils

As noted above, the Same Number of Units – Smallest Footprint Alternative would include a smaller overall area of disturbance compared to the proposed project while including the same number of residential units. As such, the same number of occupants would be subject to potential impacts related to being located on a geological 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, or be located on expansive soil, and impacts related to such would be similar as compared to the proposed project. Similar to the discussion related to cultural and tribal cultural resources above, due to the reduced development footprint of the Same Number of Units – Smallest Footprint Alternative, the Alternative's potential to destroy a unique paleontological resource or site or unique geologic feature would be reduced as compared to the proposed project. Nonetheless, Mitigation Measures 4.6-3 and 4.6-4 would still be required. Overall, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts related to Geology and Soils as compared to the proposed project.

Hazards and Hazardous Materials

Although the overall disturbance area for the Same Number of Units – Smallest Footprint Alternative would be decreased as compared to the proposed project, the Alternative would not avoid the on-site wells. Thus, similar to the proposed project, the Same Number of Units – Smallest Footprint Alternative could 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 related to on-site wells. As such, Mitigation Measure 4.7-2 would still be required. Overall, impacts related to Hazards and Hazardous Materials under the Same Number of Units – Smallest Footprint Alternative would be similar to the proposed project.

Hydrology and Water Quality

Given that the Same Number of Units – Smallest Footprint Alternative would include a smaller overall area of disturbance compared to the proposed project, the potential for the Alternative to result in construction or operational impacts related to water quality would be decreased. Nonetheless, Mitigation Measures 4.8-1 and 4.8-2 would still be required to ensure that impacts to water quality during project construction and operation would not occur. Similarly, although Mitigation Measures 4.8-4 and 4.8-5 would still be required, due to the smaller development footprint associated with the Same Number of Units – Smallest Footprint Alternative, impacts related to substantially altering 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 result in flooding on- or off-site; 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; redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation, would be reduced as compared to the proposed project. Overall, impacts related to Hydrology and Water Quality under the Same Number of Units – Smallest Footprint Alternative would be fewer than the proposed project.

Noise

The Same Number of Units – Smallest Footprint Alternative would include the construction of HDR and park uses within the project site. Similar to the proposed project, construction would occur in close proximity to existing residential receptors to the west of the project site. As such, the Alternative would have the potential to result in a significant and unavoidable impact related to the generation of a substantial temporary 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, and Mitigation Measure 4.10-1 would still be required. Despite the fact that the Same Number of Units – Smallest Footprint Alternative would not include development in the northern portion of the site, construction activities associated with the Alternative would be of similar duration and intensity as compared to the proposed project, and the impact would remain significant and unavoidable. Therefore, overall impacts related to Noise under the Same Number of Units – Smallest Footprint Alternative would be similar to the proposed project.

Population and Housing

Similar to the proposed project, the Same Number of Units – Smallest Footprint Alternative would require annexation of the project site into the City of Davis. Because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the Same Number of Units – Smallest Footprint Alternative has not been included as part of the City's growth projections. Similar to the proposed project, the Same Number of Units – Smallest Footprint Alternative include the development of 1,250 residential units and would house approximately 3,213 future residents. As such, the increase in population resulting from the Same Number of Units – Smallest Footprint Alternative would not be within the range of growth projections assumed for the City of Davis. Therefore, similar to the proposed project, the Alternative would be considered to induce substantial unplanned population growth, and a significant and unavoidable and cumulatively considerable and significant and unavoidable impact would occur. Therefore, overall impacts related to Population and Housing under the Same Number of Units – Smallest Footprint Alternative would be similar to the proposed project.

Transportation

As previously discussed, the Same Number of Units – Smallest Footprint Alternative would entail development of the project site with HDR and park uses on a smaller development footprint. Therefore, similar to the proposed project, the Same Number of Units – Smallest Footprint Alternative would generate construction traffic on local roadways and, thus, would have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and Mitigation Measure 4.13-1 would still be required.

In addition, because the Alternative would include the development of the project site with 1,250 dwelling units, use of existing transit facilities would be increased as a result of buildout of the Alternative and the Alternative would cause a substantial increase in vehicle travel demand with increases to peak evening hour delay on East Covell Boulevard during the evening commute period, thus affecting bus performance and on-time bus arrivals. As such, Mitigation Measure 4.13-3 would still be required under the Alternative. In addition, the cumulatively considerable and

significant and unavoidable impact identified for the proposed project related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis would still occur, and implementation of Mitigation Measures 4.13-8(a) and 4.13-8(b) would still be required. Furthermore, because the Alternative would still be required to implement Mitigation Measure 4.13-3, which requires construction of westbound right-turn lanes at the site's two access points on East Covell Boulevard to reduce right-turning traffic and facilitate bus performance through the corridor, construction of the turn lanes under the Alternative would increase conflicts between bicyclists and vehicles. Thus, Mitigation Measures 4.13-2 and 4.13-7 would still be required under the Alternative in order to ensure installation of bicycle and pedestrian improvements along East Covell Boulevard. Based on the above, the Same Number of Units – Smallest Footprint Alternative would still have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities and services.

With respect to VMT, the Same Number of Units – Smallest Footprint Alternative would include development of 1,250 HDR units on a reduced development footprint. Therefore, the net residential density of the Alternative would be increased to approximately 33.9 du/ac, as compared to a net residential density of approximately 11.9 du/ac under the proposed project. As discussed above, increasing the net residential density from 11.9 to 18.5 du/ac would reduce VMT to be below the regional threshold, and an increase to 14.5 du/ac would reduce VMT to be below the City threshold. As such, the Same Number of Units – Smallest Footprint Alternative would sufficiently reduce residential VMT to below both the regional threshold and the City threshold. Therefore, the Alternative would result in a less-than-significant impact related to VMT (i.e., conflicting with CEQA Guidelines Section 15064.3, subdivision (b)), and Mitigation Measures 4.13-4 and 4.13-9 would not be required.

Lastly, because the Same Number of Units – Smallest Footprint Alternative would include the development of the same number of units as the proposed project, the Alternative would similarly contribute to freeway off-ramp queuing that spills onto the freeway mainline. Therefore, changes associated with the Alternative, in combination with future buildout of the City of Davis, could result in hazards due to a geometric design feature or incompatible uses. Mitigation Measure 4.13-11 would still be required, and the impact would remain significant and unavoidable.

Overall, potential impacts related to Transportation would be fewer under the Same Number of Units – Smallest Footprint Alternative as compared to the proposed project.

Utilities and Service Systems

The Alternative would consist of the same number of dwelling units as the proposed project, and thus, generate an equivalent amount of wastewater. Given the recent capacity analysis, suggesting that the WWTP may be at or nearing its capacity, this Alternative, similar to the proposed project, could have a significant and unavoidable impact to the City's WWTP capacity. Similarly, this Alternative's incremental contribution to the significant cumulative impact on the City's WWTP capacity would be the same.

Overall, potential impacts related to Utilities and Service Systems could be similar under the Same Number of Units – Smallest Footprint Alternative as compared to the proposed project.

Alternative 5: Higher Number of Units – Same Footprint Alternative

The Higher Number of Units – Same Footprint Alternative would include the development of 236 additional residences, for a total of 1,486 residential units, as well as the same non-residential uses included in the proposed project (see Table 7-4 and Figure 7-6). The Alternative would result in a net residential density of approximately 15.5 du/ac. The HDR parcel would be located closer to East Covell Boulevard to ensure all higher density apartments are closer to proposed transit stops, consistent with strategies to reduce VMT. To accommodate HDR closer to transit stops, the community park would be located in a central area of the project site. The variety in residential unit types would be reduced as compared to the proposed project, including fewer "missing middle" (residential medium density) units. Similar to the proposed project, the Alternative would reserve land to accommodate a fire station facility adjacent to East Covell Boulevard.

Table 7-4
Alternative 5: Higher Number of Units – Same Footprint Alternative Land Use Summary

Land Use Designation	Gross Acres	Net Acres	Units
Residential Low Density	55.8	35.7	235
Residential Medium Density	45.3	29.0	338
Residential High Density	48.1	30.8	913
Subtotal	**149.2**	**95.5**	**1,486**
Urban Agricultural Transition Area	44.3	44.3	--
Park	19.5	19.5	--
Neighborhood Greenbelt	19.4	19.4	--
Subtotal	**83.2**	**83.2**	**--**
Total	**232.4**	**178.7**	**1,486**

As shown in Table 7-5 at the end of this chapter, the Higher Number of Units – Same Footprint Alternative would fully meet the majority of the project objectives. However, because the Higher Number of Units – Same Footprint Alternative would include the development of a greater number of residential units than the proposed project with a reduced number of LDR and MDR units, the Alternative would satisfy Objectives #1, #3, and #4 to a lesser extent than the proposed project. Objective #2 related to providing affordable housing would also be met to a lesser extent, because less affordable housing is required for HDR (condominium and apartment) units.

The Alternative would not meet Objective #9, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium. The park under the Alternative would be designed to be neighborhood serving. In addition, the Alternative would not meet Objective #13, as the neighborhood retail component of the proposed project would not be viable under the Alternative due to the increased number of residential units and the relocation of the park to the center of the site.

Figure 7-6
Alternative 5: Higher Number of Units – Same Footprint Alternative

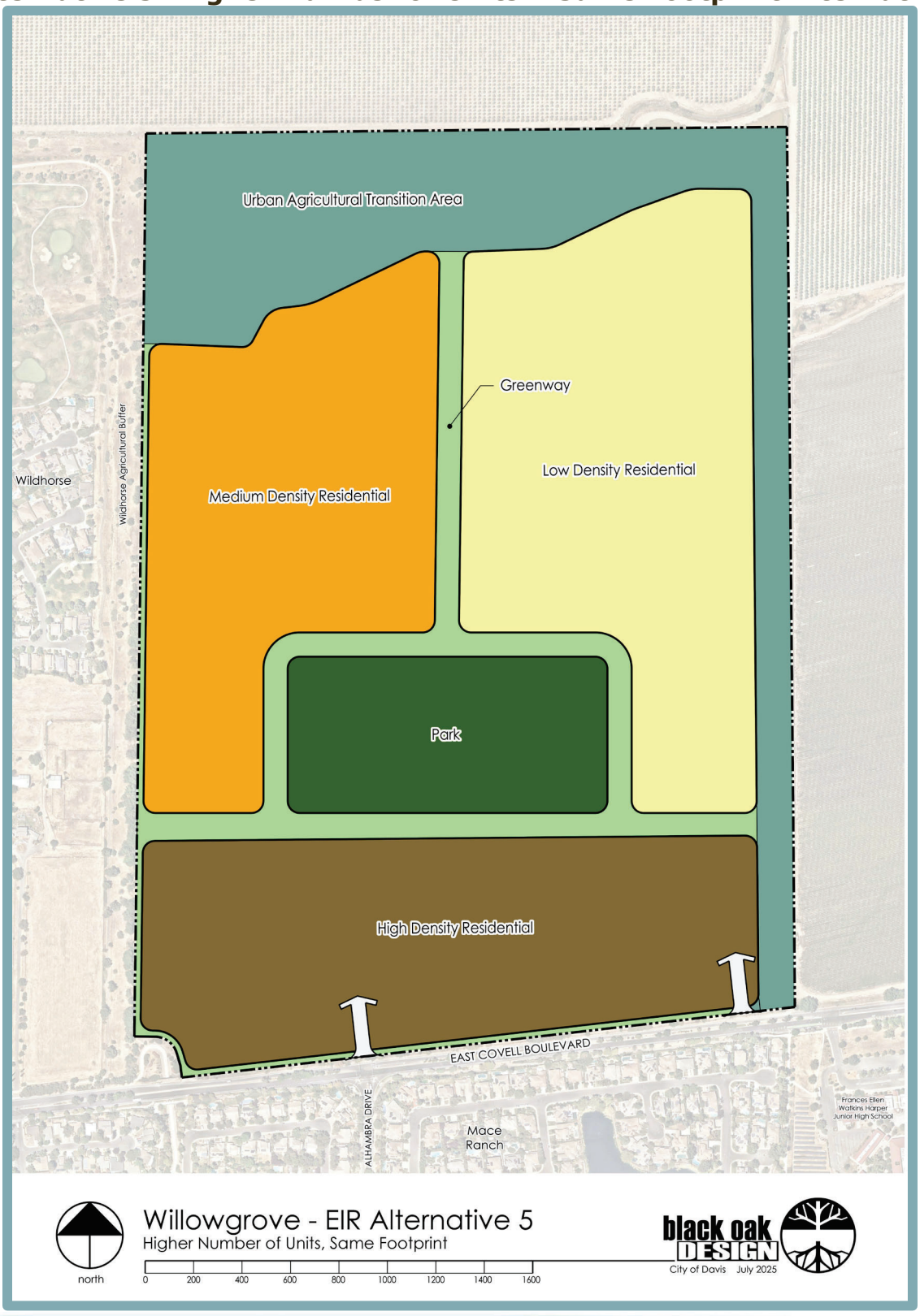


*Figure not OCR compatible.

Aesthetics

The Higher Number of Units – Same Footprint Alternative would generally consist of the development of the project site with similar types of uses as the proposed project. The Alternative would result in an increase in the amount of multi-family housing along East Covell Boulevard and the number of stories of each multi-family structure. The Alternative is anticipated to require multiple four-story, double-loaded corridor buildings, as well as three-story garden style buildings. Parking would be provided at a 1:1 ratio, and limited outdoor space would be provided. In contrast, the proposed project would include two- and three-story HDR buildings, with the possibility for a maximum of three and four stories. As such, the Alternative could disrupt the existing panoramic open space/agricultural views available on the project site to a greater degree than the proposed project. Therefore, the Higher Number of Units – Same Footprint Alternative would have a greater potential, as compared to the proposed project, to substantially degrade the existing visual character or quality of public views of the site and its surroundings, and feasible mitigation still would not exist to reduce the impact to a less-than-significant level. Thus, the project-specific and cumulative significant and unavoidable impacts related to substantially degrading the existing visual character or quality of public views of the site and its surroundings would still occur under the Alternative. In addition, the creation of new sources of light or glare would occur under the Alternative, and Mitigation Measures 4.1-3 and 4.1-5 would be required.

Overall, impacts related to Aesthetics would be greater under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project, including the identified significant and unavoidable impacts.

Agricultural Resources

The Higher Number of Units – Same Footprint Alternative would include development of the project site with similar uses to the proposed project, and would include the same development footprint. Therefore, the Alternative would result in similar significant and unavoidable impacts related to the conversion of farmland to non-agricultural uses, as well as impacts associated with involving changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.

Overall, impacts related to Agricultural Resources would be similar under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project, and Mitigation Measures 4.2-1 and 4.2-4 would still be required.

Air Quality, GHG Emissions, and Energy

The Higher Number of Units – Same Footprint Alternative would include development of the project site with similar uses as the proposed project. Although the Alternative would include the development of 236 additional residential units than currently proposed, because the development footprint of the Alternative would be the same as the proposed project, the Alternative would require the same amount of grading as the proposed project, which is the primary source of construction GHG emissions. However, because the amount of building materials required for the Higher Number of Units – Same Footprint Alternative would be greater than the proposed project, the Alternative could result in greater construction GHG emissions associated with increased worker and vendor trips. Therefore, potential impacts related to generating GHG construction emissions, either directly or indirectly, that may have a significant impact on the environment, or conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, could be greater than the proposed project, and Mitigation Measures 4.3-7(a) and 4.3-7(b) would still be required during construction.

As previously discussed, the EIR determined that the proposed project would result in significant and unavoidable impacts related to conflicting with or obstructing implementation of the applicable air quality plan during operation of the proposed project because the ROG emissions would be above the applicable YSAQMD thresholds of significance. Additionally, the EIR determined that, even with implementation of mitigation, the amount of ROG emissions generated by the proposed project would result in a cumulatively considerable and significant and unavoidable net increase of a criteria pollutant for which the project region is in non-attainment under an applicable federal or State AAQS. The EIR also determined that the proposed project would result in a cumulatively considerable and significant and unavoidable impact related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation.

As discussed above, in their Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity,[5] the CAPCOA sets forth VMT reduction strategies. As stated therein, most CAPCOA VMT reduction strategies also reduce GHG emissions and criteria pollutants, considered co-benefits, by reducing the source metric of VMT (i.e., vehicle ownership, number of vehicle trips, and trip distance). As discussed in further detail under the Transportation discussion, the Higher Number of Units – Same Footprint Alternative would result in a reduction in residential VMT per capita as compared to the proposed project. The reduction in VMT associated with the Alternative would result in a proportional reduction in mobile source emissions. Using the CAPCOA formula for Strategy T-1 (Increase Residential Density), the GHG percent reduction was calculated for the Alternative. The unmitigated operational GHG emissions would be reduced by an estimated 15.4 percent from 10,210 $MTCO_2e$/yr to 8,638 $MTCO_2e$/yr under the Higher Number of Units – Same Footprint Alternative. However, even with such a reduction, the Alternative could still result in GHG emissions that could exceed net carbon neutrality in the year 2040, and, thus, implementation of the Higher Number of Units – Same Footprint Alternative would conflict with the City's adopted goal of carbon neutrality by the year 2040. Therefore, the foregoing impact would remain significant and unavoidable and cumulatively considerable, even with implementation of Mitigation Measure 4.3-8. Nonetheless, the severity of the foregoing impact would be reduced under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

Using the CAPCOA Handbook formula for percent reduction in ROG emissions, the percentage reduction in ROG emissions, the reduction in VMT under the Alternative would result in a 13.5 percent reduction in ROG emissions, for a reduction from 14.5 tons/yr associated with the proposed project to approximately 12.5 tons/yr, which would still be above the YSAQMD significance threshold of 10 tons/yr. As such, the foregoing impacts related to criteria pollutant emissions would remain significant and unavoidable and/or cumulatively considerable, and implementation of Mitigation Measures 4.3-2, 4.3-6, and 4.3-8 would still be required.

Overall, the Higher Number of Units – Same Footprint Alternative would result in fewer impacts related to Air Quality, GHG Emissions, and Energy as compared to the proposed project.

[5] California Air Pollution Control Officers Association. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. December 2021.

Biological Resources

Similar to the proposed project, the Higher Number of Units – Same Footprint Alternative would include ground-disturbing activities on the same project site and, thus, would have the potential to impact Crotch's bumble bee, monarch butterfly, northwestern pond turtle, giant garter snake, tricolored blackbird, burrowing owl, Swainson's hawk, white-tailed kite, northern harrier, and other birds protected under the MBTA and CFGC. In addition, because the Higher Number of Units – Same Footprint Alternative would result in the same development footprint as the proposed project, the impact identified for the proposed project related to having 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, would still occur under the Alternative. Furthermore, because the Higher Number of Units – Same Footprint Alternative would include the removal of on-site trees and disturbance of riparian habitat, the Alternative would have similar potential to conflict with the City's Tree Ordinance, result in substantial adverse effects on riparian habitat and/or other sensitive natural communities, and conflict with the provisions of the Yolo HCP/NCCP. As such, Mitigation Measures 4.4-2 through 4.4-9, 4.4-10(a), 4.4-10(b), 4.4-11(a) through 4.4-11(c), 4.4-13, 4.4-14(a) through 4.4-14(g), and 4.4-15 would still be required. Therefore, overall impacts to Biological Resources would be similar under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

Cultural and Tribal Cultural Resources

The Higher Number of Units – Same Footprint Alternative would result in the development of the same uses as the proposed project, and would include the same development footprint. Similar to the proposed project, the Higher Number of Units – Same Footprint Alternative would result in on- and off-site disturbance to accommodate new development. Therefore, Mitigation Measures 4.5-2, 4.5-3, and 4.5-4(a) through 4.5-4(c) would still apply to the Alternative to mitigate the potentially significant impacts associated with the potential to cause a substantial adverse change in the significance of a unique archaeological or tribal cultural resource, or disturb human remains during construction. Overall, potential impacts related to Cultural and Tribal Cultural Resources would be similar under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

Geology and Soils

As noted above, the Higher Number of Units – Same Footprint Alternative would result in the development of similar uses as the proposed project, and would include the same development footprint. However, the Alternative would result in the development of 236 more residential units than the proposed project and, thus, could expose a greater number of individuals to potential geological hazards. Consequently, the potential for the Alternative to result in impacts related to being located on a geological 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, or be located on expansive soil, would be greater than the proposed project. However, the Alternative's potential to destroy a unique paleontological resource or site or unique geologic feature would be similar to the proposed project. As such, Mitigation Measures 4.6-3 and 4.6-4 would still be required. Overall, impacts related to Geology and Soils could be greater under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

Hazards and Hazardous Materials

Because the development footprint for the Higher Number of Units – Same Footprint Alternative would be the same as compared to the proposed project, the potential RECs identified on the project site would still occur under the Alternative. Thus, similar to the proposed project, the Higher Number of Units – Same Footprint Alternative could 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 related to on-site wells. As such, Mitigation Measure 4.7-2 would still be required. Overall, impacts related to Hazards and Hazardous Materials under the Higher Number of Units – Same Footprint Alternative would be similar to the proposed project.

Hydrology and Water Quality

Given that the Higher Number of Units – Same Footprint Alternative would include the same development footprint as the proposed project, the potential for the Alternative to result in impacts related to water quality during construction and/or operation would also be the same. Therefore, Mitigation Measures 4.8-1 and 4.8-2 would still be required. In addition, impacts related to substantially altering 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 result in flooding on- or off-site; 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; redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation, would be similar to the proposed project, and Mitigation Measures 4.8-4 and 4.8-5 would still be required. Overall, impacts related to Hydrology and Water Quality under the Higher Number of Units – Same Footprint Alternative would be similar to the proposed project.

Noise

Similar to the proposed project, the Higher Number of Units – Same Footprint Alternative would include the construction of residential and park uses within the project site. Because the Alternative would include the development of 236 more residential units than the proposed project, construction activities could last longer. However, the same pieces of construction equipment would be used, and in the same locations. The Environmental Noise Assessment prepared for the proposed project, as well as the analysis of construction noise impact significance presented in Chapter 4.10, Noise, of this EIR, is based on types of construction equipment and their respective noise levels. As such, the increased construction time would not alter the conclusions of the analysis. Therefore, the Higher Number of Units – Same Footprint Alternative would have the potential to result in a significant and unavoidable impact related to the generation of a substantial temporary 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, and Mitigation Measure 4.10-1 would still be required. The Noise analysis conducted for the proposed project did not identify any significant traffic noise increases attributable to the proposed project (Chapter 4.10, Noise, Table 4.10-12). While traffic would increase as a result of this Alternative, the traffic noise level increases identified for the proposed project are sufficiently below the applicable thresholds, such that this Alternative would not be anticipated to create any new significant impacts. Overall, impacts related to Noise under the Higher Number of Units – Same Footprint Alternative would be similar to the proposed project.

Population and Housing

Similar to the proposed project, the Higher Number of Units – Same Footprint Alternative would require annexation of the project site into the City of Davis. Because the project site is currently not located within the City of Davis and does not have a City General Plan land use designation, the Higher Number of Units – Same Footprint Alternative has not been included as part of the City's growth projections. As such, the increase in population resulting from the Alternative would not be within the range of growth projections assumed for the City of Davis. Therefore, similar to the proposed project, the Alternative would be considered to induce substantial unplanned population growth, and a significant and unavoidable and cumulatively considerable and significant and unavoidable impact would occur. Furthermore, as stated above, the Higher Number of Units – Same Footprint Alternative includes the development of 236 additional dwelling units as compared to the proposed project; using the 2.57 persons/household average household size for the City of Davis, the Alternative would house approximately 607 more residents than the proposed project. Therefore, the Higher Number of Units – Same Footprint Alternative would result in an increase in the severity of the significant and unavoidable impact related to inducing substantial unplanned population growth identified for the proposed project. Overall, the Higher Number of Units – Same Footprint Alternative would result in greater impacts related to Population and Housing as compared to the proposed project.

Transportation

As previously discussed, the Higher Number of Units – Same Footprint Alternative would entail development of the project site with similar uses as the proposed project within the same development footprint. Therefore, similar to the proposed project, the Higher Number of Units – Same Footprint Alternative would generate construction traffic on local roadways and, thus, would have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities, and Mitigation Measure 4.13-1 would still be required.

In addition, because development of the project site would be similar to the proposed project under the Alternative, use of existing transit facilities would be increased as a result of buildout of the Alternative and the Alternative would cause a substantial increase in vehicle travel demand and cause increases to peak evening hour delay on East Covell Boulevard during the evening commute period, thus affecting bus performance and on-time bus arrivals As such, Mitigation Measure 4.13-3 would still be required under the Alternative. In addition, the cumulatively considerable and significant and unavoidable impact identified for the proposed project related to conflicting with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis would still occur, and implementation of Mitigation Measures 4.13-8(a) and 4.13-8(b) would still be required. Furthermore, because the Alternative would still be required to implement Mitigation Measure 4.13-3, which requires construction of westbound right-turn lanes at the site's two access points on East Covell Boulevard to reduce right-turning traffic and facilitate bus performance through the corridor, construction of the turn lanes under the Alternative would increase conflicts between bicyclists and vehicles. Thus, Mitigation Measures 4.13-2 and 4.13-7 would still be required under the Alternative in order to ensure installation of bicycle and pedestrian improvements along East Covell Boulevard. Based on the above, the Higher Number of Units – Same Footprint Alternative would still have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian, bicycle, and transit facilities and services.

As discussed, increasing the residential density from 11.9 (proposed project) to 18.5 units per net acre would reduce VMT to be below the regional threshold, and an increase to 14.5 would reduce VMT to be below the City threshold. The Higher Number of Units – Same Footprint Alternative would include development of 236 additional units than the proposed project within the same development footprint. Therefore, the net residential density of the Alternative would be increased to approximately 15.5 du/ac, as compared to a net residential of density of approximately 11.9 du/ac under the proposed project. As such, the Higher Number of Units – Same Footprint Alternative would reduce VMT per capita below the local threshold, but would not reduce residential VMT to below the regional threshold. In order to reduce VMT to below the regional threshold, the Alternative would be required to include an additional 284 HDR units, for a total of 1,770 dwelling units. Therefore, while the Alternative would reduce residential VMT as compared to the proposed project, even with implementation of Mitigation Measures 4.13-4 and 4.13-9, the Higher Number of Units – Same Footprint Alternative would still result in a significant and unavoidable and cumulatively considerable and significant and unavoidable impact related to VMT (i.e., conflicting with CEQA Guidelines Section 15064.3, subdivision (b)).

Lastly, because the Higher Number of Units – Same Footprint Alternative would include the development of 236 additional units as compared to the proposed project, the Alternative would similarly contribute to freeway off-ramp queuing that spills onto the freeway mainline. Therefore, changes associated with the Alternative, in combination with future buildout of the City of Davis, could result in hazards due to a geometric design feature or incompatible uses. Mitigation Measure 4.13-11 would still be required, and the impact would remain significant and unavoidable.

Overall, potential impacts related to Transportation would be fewer under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

Utilities and Service Systems

The Higher Number of Units – Same Footprint Alternative includes the development of 236 additional dwelling units as compared to the proposed project; Using the metrics in the WWTP Capacity Memorandum, this would equate to an increase in wastewater flow by approximately 35,000 gallons per day, as compared to the proposed project. As a result, this Alternative could have an increased impact on the City's WWTP capacity, which was determined to be significant and unavoidable for the proposed project, given the recent capacity analysis, suggesting that the WWTP may be at or nearing its capacity. Similarly, this Alternative's incremental contribution to the significant cumulative impact on the City's WWTP capacity could be greater.

Overall, potential impacts related to Utilities and Service Systems could be greater under the Higher Number of Units – Same Footprint Alternative as compared to the proposed project.

7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. The environmentally superior alternative is generally the alternative that would be expected to generate the least number of significant impacts. However, the lead agency may consider certain issue areas as a higher priority than others. For the purposes of this EIR, reduction of impacts related to VMT are considered a high priority due to the potential consequences of climate change for the City of Davis and the contribution to GHG emissions from transportation sources. As discussed in Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR, according to the Climate Change Vulnerability Assessment

conducted as part of the City's CAAP, like much of California, the City is already experiencing impacts from extreme heat events, flooding and extreme precipitation, drought and poor air quality caused by wildfire smoke. The Climate Change Vulnerability Assessment identified how such impacts are likely to change through mid-century and end-of-century timeframes. Specifically, projected changes include an increase in the number of extreme heat days, increased wildfire frequency and intensity, more intense precipitation events, and more frequent and/or prolonged droughts. Consequently, on March 5, 2019, the Davis City Council adopted a resolution declaring a climate emergency, which proposed a regional mobilization effort to reduce the effects of climate change. As part of the regional mobilization effort, the resolution accelerated the City's previously stated goal of achieving carbon neutrality by the year 2050 to a new carbon neutrality target date of 2040.

Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets the goals or needs of the City. Section 15126.6(e)(2) of the CEQA Guidelines requires that, "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." In this case, Alternative 1: No Project (No Build) Alternative would be considered the environmentally superior alternative, because the project site is assumed to remain in its current condition under the alternative. Consequently, as shown in Table 7-6 below, the No Project (No Build) Alternative would result in no impacts related to the majority of the resources areas where potentially significant and/or significant and unavoidable impacts were identified for the proposed project, and fewer impacts than the proposed project related to the other resources areas where potentially significant and/or significant and unavoidable impacts were identified for the proposed project. However, the No Project (No Build) Alternative would not meet the majority of project objectives, and thus, an environmentally superior alternative among the other alternatives must be identified pursuant to CEQA.

Alternative 4: Same Number of Units – Smallest Footprint Alternative would generally meet the majority of the project objectives, but to a lesser extent as compared to the proposed project due to the exclusive development of HDR units. However, as discussed above and shown in Table 7-6, the Same Number of Units – Smallest Footprint Alternative would result in fewer impacts than the proposed project related to Transportation; specifically, the significant and unavoidable VMT impact (project-level and cumulative) related to conflicting or being inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) would not occur under the Alternative due to the increased residential density. The Alternative would result in fewer impacts as compared to the proposed project related to Agricultural Resources, Air Quality, GHG Emissions, and Energy, Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils, Hydrology and Water Quality, and Transportation; similar impacts as the proposed project related to Hazards and Hazardous Materials, Noise, Population and Housing, and Utilities and Service Systems; and greater impacts compared to the proposed project related Aesthetics. It is noted that the significant and unavoidable impacts related to temporary construction noise, visual character, agricultural resources, population growth, transit facilities, transportation hazards, and wastewater treatment plant capacity identified for the proposed project would still occur under the Alternative. Overall, Alternative 4: Same Number of Units – Smallest Footprint Alternative is the only alternative that eliminates the proposed project's significant and unavoidable VMT impacts and associated impacts related to criteria pollutants. Thus, Alternative 4: Same Number of Units – Smallest Footprint Alternative is considered the environmentally superior alternative.

Table 7-5
Comparison of Alternatives Consistency with Project Objectives

Objective	Alternative 1: No Project (No Build) Alternative	Alternative 2: Lower Number of Units – Same Footprint Alternative	Alternative 3: Same Number of Units – Smaller Footprint Alternative	Alternative 4: Same Number of Units – Smallest Footprint Alternative	Alternative 5: Higher Number of Units – Same Footprint Alternative
1. Provide a meaningful number of housing units for the City, in a balanced and wide variety of densities, products and price points.	Would not meet.	Would meet.	Would meet to a lesser extent as compared to the proposed project due to the reduction in LDR and MDR units and increase in HDR uses.	Would not meet as a mix of housing products would not be provided. Only HDR uses would be provided.	Would meet to a lesser extent as compared to the proposed project due to the reduction in LDR and MDR units and increase in HDR uses.
2. Provide 20 percent of the total residential units for the construction of deed-restricted affordable housing for low, very low and extremely low-income households.	Would not meet.	Would meet.	Would meet to a lesser extent as compared to the proposed project, as the affordable housing obligation pursuant to Davis Municipal Code would be reduced. Less affordable housing is required for HDR units. Would likely not be economically viable to exceed Davis Municipal Code affordable housing requirements.	Would meet to a lesser extent as compared to the proposed project, as the affordable housing obligation pursuant to Davis Municipal Code would be reduced. The affordable housing obligation under Davis Municipal Code would be five or 10 percent of HDR units. With the loss of single-family lots to spread the costs of infrastructure and allow the dedication of land at no cost, deed-restricted affordable housing units would likely be limited to Code requirements. Would likely not be economically viable to exceed Davis Municipal Code affordable housing requirements.	Would meet to a lesser extent as compared to the proposed project, as the affordable housing obligation pursuant to Davis Municipal Code would be reduced. Less affordable housing is required for HDR units. Would likely not be economically viable to exceed Davis Municipal Code affordable housing requirements.
3. Provide more attainable homeownership opportunities for the "missing middle" households and young families, including 23 percent of the total residential units offering higher density condominiums/townhomes that are anticipated to be more attainable to these households.	Would not meet.	Would meet.	Would meet to a lesser extent as compared to the proposed project due to the reduction in LDR and MDR units and increase in HDR units.	Would meet to a lesser extent as compared to the proposed project as a mix of housing products would not be provided. Only HDR apartment units would be provided. As such, the Alternative is less likely to provide more attainable homeownership opportunities for the "missing middle" and young families that desire single-family units with private yards.	Would meet to a lesser extent as compared to the proposed project due to the reduction in LDR and MDR units and increase in HDR units.
4. Prioritize the use of high and medium density housing for the missing middle and young families who are currently unable to find or afford housing in Davis.	Would not meet.	Would meet to a lesser extent as compared to the proposed project due to the development of 313 fewer total residential units, including 64 fewer MDR housing units and 315 fewer HDR housing units.	Would meet to a lesser extent as compared to the proposed project due to the development of 233 fewer MDR housing units.	Would meet to a lesser extent as compared to the proposed project due to the development of 515 fewer MDR housing units.	Would meet to a lesser extent as compared to the proposed project due to the development of 177 fewer MDR housing units.

Table 7-5
Comparison of Alternatives Consistency with Project Objectives

Objective	Alternative 1: No Project (No Build) Alternative	Alternative 2: Lower Number of Units – Same Footprint Alternative	Alternative 3: Same Number of Units – Smaller Footprint Alternative	Alternative 4: Same Number of Units – Smallest Footprint Alternative	Alternative 5: Higher Number of Units – Same Footprint Alternative
5. Create the type of housing that will encourage young families to buy and live in Davis, increasing the number of children attending Davis Joint Unified School District (DJUSD) schools.	Would not meet.	Would meet to a lesser extent as compared to the proposed project, as the reduction in units under the Alternative would reduce student yield by approximately 19 percent, with an estimated student generation of 591 students.	Would meet to a lesser extent as compared to the proposed project, as the reduction in LDR and MDR units under the Alternative would reduce student yield by approximately 10 percent, with an estimated student generation of 658 students.	Would meet to a lesser extent as compared to the proposed project, as the reduction in LDR and MDR units under the Alternative would reduce student yield by approximately 24 percent, with an estimated student generation of 550 students.	Would meet to a greater extent as compared to the proposed project, as the increased units under the Alternative would increase student yield by approximately nine percent, with an estimated student generation of 797 students.
6. Encourage people living outside and commuting in to Davis to live in Davis, thereby reducing regional vehicle miles traveled (VMT) and associated environmental impacts.	Would not meet.	Would not meet due to the reduced residential density.	Would meet to a greater extent as compared to the proposed project due to the increased residential density and reduced VMT.	Would meet to a greater extent as compared to the proposed project due to the increased residential density and reduced VMT.	Would meet to a greater extent as compared to the proposed project due to the increased residential density and reduced VMT.
7. Respect existing agricultural uses by providing buffers that create a transitional space and encourage residents to appreciate the value of both uses coexisting together while establishing a thoughtfully designed urban City boundary.	Would meet because the project site would remain in agricultural use.	Would meet.	Would meet. While less agricultural buffer would be provided along the northern site boundary, the land would remain in agricultural use.	Would meet. While less agricultural buffer would be provided along the northern site boundary, the land would remain in agricultural use.	Would meet.
8. Develop an inclusive community for all, including those with intellectual or developmental disabilities with independent housing, recreation, and employment opportunities designed to meet the unique needs of that cohort.	Would not meet.	Would meet.	Would meet.	Would meet.	Would meet.
9. Provide a vibrant community park with active ballfields, inclusive play areas, and an indoor gymnasium, proximate to existing residents as well as new homeowners.	Would not meet.	Would not meet, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium. The park under the Alternative would be designed to be neighborhood serving.	Would not meet, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium. The park under the Alternative would be designed to be neighborhood serving.	Would not meet, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium. The park under the Alternative would be designed to be neighborhood serving.	Would not meet, as the Alternative would not include a community park with active ballfields, inclusive play areas, and an indoor gymnasium. The park under the Alternative would be designed to be neighborhood serving.
10. Provide a transit station and stops, allowing easy access to transit for neighborhood residents and visitors and reducing the use of individual automobiles.	Would not meet.	Would meet.	Would meet.	Would meet.	Would meet.
11. Create outdoor educational opportunities for various age groups and abilities, which encourage	Would not meet.	Would meet.	Would meet.	Would meet.	Would meet.

Table 7-5
Comparison of Alternatives Consistency with Project Objectives

Objective	Alternative 1: No Project (No Build) Alternative	Alternative 2: Lower Number of Units – Same Footprint Alternative	Alternative 3: Same Number of Units – Smaller Footprint Alternative	Alternative 4: Same Number of Units – Smallest Footprint Alternative	Alternative 5: Higher Number of Units – Same Footprint Alternative
exploration and complement existing programs within the City.					
12. Expand the City's existing bikeway and pedestrian trail system and provide important connections to new off-site bikeways and existing public trails.	Would not meet.	Would meet.	Would meet to a lesser extent as compared to the proposed project, as the Alternative would not include a connection to the existing off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail), and connections to the trail within the Wildhorse Agricultural Buffer would be reduced. The Alternative also would not include a trail along Channel A.	Would meet to a lesser extent as compared to the proposed project, as the Alternative would not include a connection to the existing off-site City of Davis trails located to the north (i.e., Gill Orchard Easement trail), and connections to the trail within the Wildhorse Agricultural Buffer would be reduced. The Alternative also would not include a trail along Channel A.	Would meet.
13. Support existing retailers by avoiding the construction of brick-and-mortar retail and instead providing an eclectic neighborhood retail and entertainment area with opportunities to incorporate a Competitive Integrated Employment (CIE) program for persons living with intellectual or developmental disabilities.	Would not meet.	Would not meet, as the neighborhood retail component of the proposed project would not be provided under the Alternative.	Would not meet, as the neighborhood retail component of the proposed project would not be viable under the Alternative due to the reduced development footprint.	Would not meet, as the neighborhood retail component of the proposed project would not be viable under the Alternative due to the reduced development footprint.	Would not meet, as the neighborhood retail component of the proposed project would not be viable under the Alternative due to the increased number of residential units and the relocation of the park to the center of the site.
14. Design an environmentally sensitive and sustainable community that features an urban forest throughout the connected trail system and emphasizes the use of rooftop solar electricity to reduce the community's environmental footprint, reduce automobile and water use, and increase tree cover.	Would not meet.	Would meet.	Would not meet, as the urban forest would not be provided given reduced footprint and inability to retain as much land in open space.	Would not meet, as the urban forest would not be provided given reduced footprint and inability to retain as much land in open space.	Would meet.
15. Create an economically feasible project able to construct the special amenities and features proposed for the neighborhood.	Would not meet.	Would likely meet, but community-wide amenities would be reduced to reduce City costs under the Alternative.	Would meet to a lesser extent as compared to the proposed project due to the increase in HDR units. Community-wide amenities would be reduced to reduce VMT. A centralized park would be included to provide HDR units closer to transit stops.	Would meet to a lesser extent as compared to the proposed project due to the increase in HDR units. Community-wide amenities would be reduced to reduce VMT. A centralized park would be included to provide HDR units closer to transit stops.	Would likely meet, but community-wide amenities would be reduced to reduce VMT. A centralized park would be included to provide HDR units closer to transit stops.



Table 7-6
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Impact	Proposed Project	Alternative 1: No Project (No Build) Alternative	Alternative 2: Lower Number of Units – Same Footprint Alternative	Alternative 3: Same Number of Units – Smaller Footprint Alternative	Alternative 4: Same Number of Units – Smallest Footprint Alternative	Alternative 5: Higher Number of Units – Same Footprint Alternative
4.1 Aesthetics						
4.1-2 In a non-urbanized area, 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) or, in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.	**Significant and Unavoidable**	None	**Similar***	**Fewer***	**Greater***	**Greater***
4.1-3 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.1-4 Long-term changes in visual character associated with cumulative development of the proposed project in combination with future buildout of the City of Davis General Plan.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Similar***	**Fewer***	**Greater***	**Greater***
4.1-6 Creation of new sources of light or glare associated with development of the proposed project in combination with future buildout of the City of Davis.	Less Than Cumulatively Considerable with Mitigation	None	Similar	Similar	Similar	Similar
4.2 Agricultural Resources						
4.2-1 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 non-agricultural use or agricultural land as defined in Davis Municipal Code Chapter 40A.	**Significant and Unavoidable**	None	**Similar***	**Fewer***	**Fewer***	**Similar***
4.2-4 Involve changes in the existing environment which, due to their location or nature, could cumulatively result in loss of Farmland to non-agricultural use.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Similar***	**Fewer***	**Fewer***	**Similar***
4.3 Air Quality, Greenhouse Gas Emissions, and Energy						
4.3-2 Conflict with or obstruct implementation of the applicable air quality plan during project operation.	**Significant and Unavoidable**	Fewer	**Fewer***	**Fewer***	Fewer	**Fewer***

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4.3-6 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).	**Cumulatively Considerable and Significant and Unavoidable**	Fewer	**Fewer***	**Fewer***	Fewer	**Fewer***
4.3-7 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during construction.	Less-Than-Cumulatively-Considerable with Mitigation	Fewer	Fewer	Fewer	Fewer	Greater
4.3-8 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs during operation.	**Cumulatively Considerable and Significant and Unavoidable**	Fewer	**Fewer***	**Fewer***	**Fewer***	**Fewer***
4.4 Biological Resources						
4.4-2 Have a substantial adverse effect, either directly or through habitat modifications, on Crotch's bumble bee.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-3 Have a substantial adverse effect, either directly or through habitat modifications, on monarch butterfly.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-4 Have a substantial adverse effect, either directly or through habitat modifications, on northwestern pond turtle.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-5 Have a substantial adverse effect, either directly or through habitat modifications, on giant garter snake.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-6 Have a substantial adverse effect, either directly or through habitat modifications, on tricolored blackbird.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-7 Have a substantial adverse effect, either directly or through habitat modifications, on burrowing owl.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar

Table 7-6
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4.4-8 Have a substantial adverse effect, either directly or through habitat modifications, on Swainson's hawk or white-tailed kite.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-9 Have a substantial adverse effect, either directly or through habitat modifications, on northern harrier, other nesting birds, and other raptors protected under the MBTA and CFGC.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.4-10 Have a substantial adverse effect on any riparian habitat or other Sensitive Natural Community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.4-11 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.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.4-13 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or have a substantial adverse effect on the environment by converting oak woodlands or impacting individual trees.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.4-14 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.4-15 Cumulative loss of habitat for special-status species.	Less Than Cumulatively Considerable	Fewer	Similar	Fewer	Fewer	Similar
4.5 Cultural and Tribal Cultural Resources						
4.5-2 Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.5-3 Disturb any human remains, including those interred outside of dedicated cemeteries.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar

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4.5-4 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074.	Less-Than-Significant with Mitigation	Fewer	Similar	Fewer	Fewer	Similar
4.6 Geology and Soils						
4.6-3 Be located on a geological 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, or be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, creating substantial risks to life or property.	Less-Than-Significant with Mitigation	None	Fewer	Similar	Similar	Greater
4.6-4 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.7 Hazards and Hazardous Materials						
4.7-2 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.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.8 Hydrology and Water Quality						
4.8-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.8-2 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operations.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.8-4 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: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or create or contribute runoff water which would exceed the capacity of existing or planned	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar

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stormwater drainage systems or provide substantial additional sources of polluted runoff.						
4.8-5 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 impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.	Less-Than-Significant with Mitigation	None	Similar	Fewer	Fewer	Similar
4.10 Noise						
4.10-1 Generation of a substantial temporary 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.	**Significant and Unavoidable**	Fewer	**Similar***	**Similar***	**Similar***	**Similar***
4.11 Population and Housing						
4.11-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure).	**Significant and Unavoidable**	None	**Fewer***	**Similar***	**Similar***	**Greater***
4.11-2 Cumulative unplanned population growth.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Fewer***	**Similar***	**Similar***	**Greater***
4.13 Transportation						
4.13-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.13-2 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.13-3 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar

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4.13-4 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	**Significant and Unavoidable**	None	**Greater***	**Similar***	Fewer	**Fewer***
4.13-7 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including pedestrian and bicycle facilities, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	Less-Than-Significant with Mitigation	None	Similar	Similar	Similar	Similar
4.13-8 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities and services, associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Similar***	**Similar***	**Similar***	**Similar***
4.13-9 Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Greater***	**Similar***	Fewer	**Fewer***
4.13-11 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) associated with cumulative development of the proposed project in combination with future buildout of the City of Davis.	**Significant and Unavoidable**	None	**Fewer***	**Similar***	**Similar***	**Similar***
4.14 Utilities and Service Systems						
4.14-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	**Significant and Unavoidable**	None	**Fewer***	**Similar***	**Similar***	**Greater***

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4.14-5 Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the City of Davis General Plan.	**Cumulatively Considerable and Significant and Unavoidable**	None	**Fewer***	**Similar***	**Similar***	**Greater***

Note: No Impact = "None;" Greater than the proposed project = "Greater," Less than proposed project = "Fewer;" and Similar to proposed project = "Similar"
Significant and Unavoidable impacts are presented in **bold** font.

* Significant and Unavoidable impact(s) determined for the proposed project would still be expected to occur under the Alternative.

8. EIR Authors and Persons Consulted

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Raney Planning & Management, Inc.

C. Timothy Raney, AICP	President
Cindy Gnos, AICP	Senior Vice President
Nick Pappani	Vice President
Rod Stinson	Vice President/Air Quality Specialist
Angela DaRosa	Division Manager/Air Quality Specialist
Jesse Fahrney	Assistant Division Manager/Air Quality Specialist
Elijah Bloom	Senior Associate
Taylor Hauft	Associate II
Elizabeth Carr	Associate
Roxanne Fernandez	Associate
Stephanie McMindes	Associate
Alexander Levy	Associate
Grace Olsen	Air Quality Technician

City of Davis

Sherri Metzker	Director of Community Development
Dara Dungworth	Principal Planner
Eric Lee	Senior Planner
Ryan Chapman	Director of Public Works Engineering and Transportation and City Traffic Engineer
Stan Gryczko	Director of Public Works Utilities and Operations

Balance Hydraulics, Inc.

Edward D. Ballman, PE	Principal Engineer
Denise Tu, E.I.T	Fluvial Geomorphologist/Engineer

Brown and Caldwell

Melanie Holton, PE	Director of Water Planning

Brusca Associates, Inc.

Joe Brusca	Principal Engineering Geologist
Alycia Cridebring	Environmental Specialist

Carlson, Barbee and Gibson, Inc.

Andrea J. Bellanca, PE, LS	Principal

Cunningham Engineering Corporation

Brian Foster, PE	Project Manager
Shekar Raj Mote, PE	Staff Engineer

Fehr & Peers

Greg Behrens, AICP	Principal/Sacramento Operations Manager
John Gard	Principal

Helix Environmental Planning, Inc.

Michael Scaffidi	Senior Biologist
Christine Gonzalez	Biology Project Manager
Brandt Muller	Wildlife Biologist
Patrick Martin	Senior Scientist
Ben Siegel, MA, RPA	Cultural Resources Project Manager
Jentin Joe	Staff Archaeologist
Dena Elimelech	Biologist

Saxelby Acoustics, LLC

Luke Saxelby, INCE Bd. Cert.	Principal Consultant

West Yost

Charles Hardy, PE	Principal Engineer
Patrick Johnson, PE	Principal Engineer
Kathryn Gies, PE	Engineering Manager
Chris Malone, PE	Senior Engineer

Youngdahl Consulting Group, Inc.

Matther J. Gross, PE, GE	Senior Geotechnical Engineer/Vice President
Ian T. Kitamura	Staff Engineer

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