

PUBLIC REVIEW DRAFT

**INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION**

**ALLAN WITT COMMUNITY PARK RENOVATION PROJECT
FAIRFIELD, CALIFORNIA**



LSA

April 2019

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MITIGATED NEGATIVE DECLARATION**

**ALLAN WITT COMMUNITY PARK RENOVATION PROJECT
FAIRFIELD, CALIFORNIA**

Submitted to:

City of Fairfield
Public Works Department
1000 Webster Street
Fairfield, California 94533-4836

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. CAL1801



April 2019

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TABLE OF CONTENTS

FIGURES AND TABLES	ii
LIST OF ABBREVIATIONS AND ACRONYMS	iii
1.0 PROJECT INFORMATION	1-1
2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED.....	2-1
2.1 Determination	2-1
3.0 CEQA ENVIRONMENTAL CHECKLIST	3-1
3.1 Aesthetics	3-1
3.2 Agriculture and Forestry Resources	3-4
3.3 Air Quality	3-6
3.4 Biological Resources.....	3-15
3.5 Cultural Resources	3-23
3.6 Geology and Soils	3-30
3.7 Greenhouse Gas Emissions	3-35
3.8 Hazards and Hazardous Materials.....	3-39
3.9 Hydrology and Water Quality	3-45
3.10 Land Use and Planning	3-50
3.11 Mineral Resources.....	3-53
3.12 Noise.....	3-54
3.13 Population and Housing	3-69
3.14 Public Services.....	3-70
3.15 Recreation	3-73
3.16 Transportation/Traffic.....	3-74
3.17 Tribal Cultural Resources	3-98
3.18 Utilities and Service Systems.....	3-100
3.19 Mandatory Findings of Significance	3-104
4.0 LIST OF PREPARERS	4-1
5.0 REFERENCES	5-1

APPENDICES

- A: AIR QUALITY MODELING RESULTS
- B: NOISE MODELING RESULTS

FIGURES AND TABLES

FIGURES

Figure 1: Regional Location	1-2
Figure 2: Project Location.....	1-3
Figure 3: Preferred Renovation Plan	1-5
Figure 4: Master Phasing Plan	1-6
Figure 5: 5-Year Renovation Plan	1-7
Figure 6: Project Trip Distribution (Percentages).....	3-83
Figure 7: Project Trip Assignment	3-84
Figure 8: Existing Peak Hour Traffic Volumes, Land Configurations and Traffic Controls.....	3-85
Figure 9: Existing With Project Peak Hour Traffic Volumes, Land Configurations and Traffic Controls	3-87
Figure 10: Existing Plus Approved without Project Peak Hour Traffic Volumes, Land Configurations and Traffic Controls	3-88
Figure 11: Existing Plus Approved with Project Peak Hour Traffic Volumes, Land Configurations and Traffic Controls	3-90
Figure 12: Cumulative without Project Peak Hour Traffic Volumes, Land Configurations and Traffic Controls	3-92
Figure 13: Cumulative with Project Peak Hour Traffic Volumes, Land Configurations and Traffic Controls	3-94

TABLES

Table 1: Matrix of Allan Witt Park Amenities	1-11
Table 2: Project Construction Emissions in Pounds Per Day	3-10
Table 3: Project Operational Emissions.....	3-12
Table 4: Special-Status Species Within 1 Mile of the Project Site.....	3-17
Table 5: Regional Active Faults.....	3-32
Table 6: GHG Emissions (Metric Tons Per Year).....	3-37
Table 7: Maximum Allowable Noise Exposure to Ground Transportation Noise Sources	3-55
Table 8: Noise-Level Performance Standards for New Projects Affected by or Including Non-Transportation Sources	3-56
Table 9: Short-Term Ambient Noise Monitoring Results, dBA.....	3-57
Table 10: Meteorological Conditions During Ambient Noise Monitoring.....	3-57
Table 11: Typical Construction Equipment Noise Levels.....	3-59
Table 12: Vibration Source Amplitudes for Construction Equipment.....	3-66
Table 13: Summary of Construction Equipment and Activity Vibration	3-66
Table 14: Signalized Intersection Level of Service Definitions	3-78
Table 15: Intersection Level of Service Definitions	3-79
Table 16: Project Vehicular Trip Generation	3-81
Table 17: Existing and Existing Plus Project Intersection Level of Service	3-86
Table 18: EPAP Intersection Level of Service	3-89
Table 19: Cumulative Intersection Level of Service	3-93

LIST OF ABBREVIATIONS AND ACRONYMS

AB 52	California Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities
APE	Area of Potential Effects
APN	Assessor's Parcel Number
BAAQMD	Bay Area Air Quality Management District
BESO	Building Energy Saving Ordinance
bgs	below ground surface
BMP	Best Management Practices
CalEEMod	California Emissions Estimator Model
CASQA	California Stormwater Quality Association
CNDDB	California Natural Diversity Database
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGF	California Fish and Game Code
CGS	California Geological Survey
CH ₄	Methane
City	City of Fairfield
Clean Air Plan	BAAQMD 2017 Clean Air Plan
CNEL	community noise equivalent level
CO	Carbon monoxide
CO ₂	Carbon dioxide

CO ₂ e	CO ₂ equivalents
CMP	Congestion Management Program
CRHR	California Register of Historical Resources
CT	Thoroughfare Commercial
CUP	Conditional Use Permit
CY	cubic yards
dBA	A-weighted decibels
DTSC	State of California Department of Toxic Substances Control
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
ESA	Environmental Site Assessment
ESU	Evolutionarily Significant Units
FAR	Federal Aviation Regulations
Fc	footcandles
FEMA	Federal Emergency Management Agency
FFD	City of Fairfield Fire Department
FPD	Fairfield Police Department
FSSD	Fairfield Suisun Sewer District
FTE	full-time equivalent
GHGs	greenhouse gases
GWP	global warming potential
gpd	gallons per day
HCP	Solano Habitat Conservation Plan
HiAP	Health in All Policies Strategy

IB	Business Industrial Zoning District
IESNA	Illuminating Engineering Society of North America
IL	Light Industrial Zoning District
LED	light-emitting diode
L _{dn}	day-night average level
L _{eq}	Equivalent continuous sound level
LID	low impact development
LOS	Level of Service
LUST	Leaking Underground Storage Tank
µg/m ³	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MLD	Native American Most Likely Descendant
MMI	Modified Mercalli Intensity
MRP	Municipal Regional Permit
msl	mean sea level
NO ₂	Nitrogen dioxide
N ₂ O	Nitrous oxide
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
NWIC	Northwest Information Center
O ₃	ozone
OSR	Open Space Recreation
Pb	lead

PG&E	Pacific Gas & Electric Company
PM	particulate matter
POTWs	publicly owned treatment works
PRC	Public Resources Code
proposed project	Allan Witt Community Park Renovation Project
Qa	Alluvium
RLM	Low-Medium Residential
ROGs	Reactive Organic Gases
RWQCB	San Francisco Bay Regional Water Quality Control Board
SCP	Stormwater Control Plan
SMP	Site Management Plan
SO ₂	Sulfur dioxide
SQGs	small quantity generators
SSC	Species of Special Concern
SSSC	Side-Street-Stop-Controlled
STA	Solano Transportation Authority
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
UCMP	University of California Museum of Paleontology
VOCs	Volatile Organic Compounds
WWTP	Wastewater Treatment Plant

1.0 PROJECT INFORMATION

1. Project Title:

Allan Witt Community Park Renovation Project

2. Lead Agency Name and Address:

City of Fairfield
1000 Webster Street
Fairfield, California 94533

3. Contact Person and Phone Number:

Caroline Vedder, Associate Civil Engineer, (707) 428-7484

4. Project Location:

The Allan Witt Community Park is located at 1741 West Texas Street, Fairfield, Solano County, California (Assessor's Parcel Number [APNs]: 0031-170-200 & 0031-282-010). Access is from the north via West Texas Street and from the south via Woolner Avenue. Figures 1 and 2 provide the Regional Location and Project Location, respectively.

5. Project Sponsor's Name and Address:

City of Fairfield
1000 Webster Street
Fairfield, California 94533

6. General Plan Designation:

Recreation (OSR)

7. Zoning:

Recreation (REC)

8. Description of Project:

The City of Fairfield (City) proposes to renovate the existing 48-acre Allan Witt Community Park to improve safety, visibility, and upgrade existing park recreation facilities in need of refurbishment and repair, as well as add new recreation opportunities.

Project Background. Allan Witt Community Park was identified as one of three parks to be part of the Community Spaces Initiative (Initiative), a coordinated multi-departmental effort to activate existing park spaces and reduce rates of blight and crime. The Initiative was integrated with the Heart of Fairfield Plan, which provides a vision for improvement of the City's downtown core. As part of the Initiative, a comprehensive analysis of the existing park was conducted that provided the background for the revitalization of the park through a park renovation planning process. Following a year-long planning and public outreach process, the City Council adopted the Allan Witt Community Park Renovation Plan in March 2018.

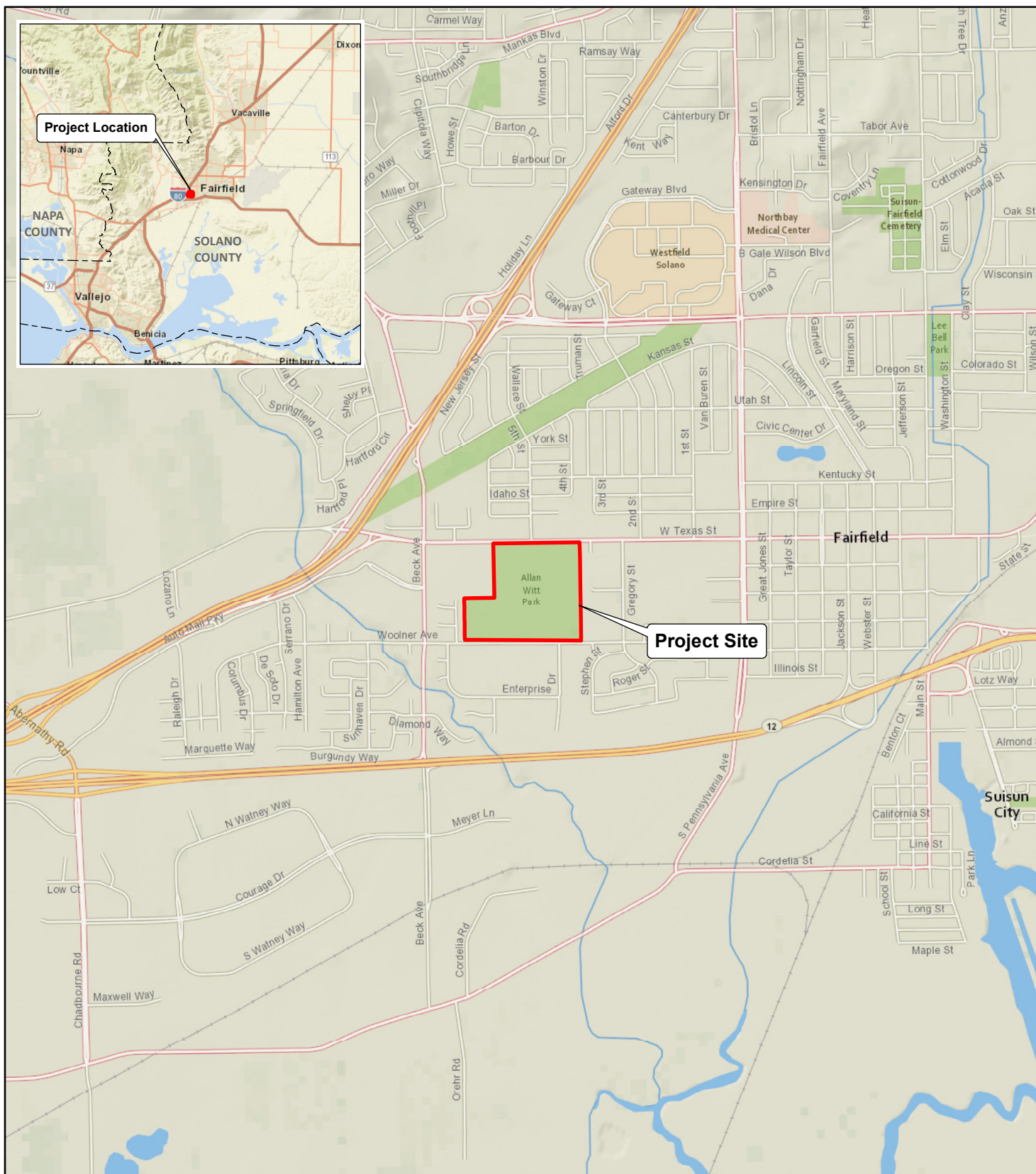
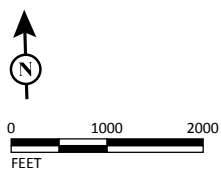


FIGURE 1

LSA



SOURCE: National Geographic (c) 2018; Esri World Street Map (c) 2018.

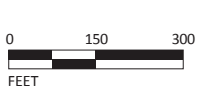
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Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Regional Location



FIGURE 2

LSA



Project Location

*Alan Witt Community Park Renovation Project
1741 West Texas Street, Fairfield, Solano County*

Project Location

SOURCE: GOOGLE EARTH, 2-5-18; LSA, 2018.

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The Allan Witt Community Park Renovation Plan serves as a road map for future park redevelopment. The Plan identifies community-supported improvements, as well as a strategic approach for implementation that will minimize disturbance of the site, preserve the greatest park attributes, incorporate new amenities to support the community goals, and enhance safety and security. This Initial Study evaluates the potential environmental effects of implementing the Council-approved Renovation Plan.

Existing Conditions. The City is proposing improvements to the existing Allan Witt Community Park, located between West Texas Street and Woolner Avenue in downtown Fairfield. Existing facilities at the park include little league baseball fields, softball/multipurpose fields, a skate park, an adult baseball field, basketball courts, tennis courts, three restroom facilities, sports center (gym), aquatics complex, picnic areas, two playgrounds, horseshoe pits, paved parking areas and one gravel parking lot used for overflow parking during sports tournaments. Several of the sports facilities, including the adult baseball field, and two of the softball fields, tennis courts and basketball courts, currently have lights to accommodate evening use.

Vehicle access to the site is provided by one driveway on West Texas Street and two driveways on Woolner Avenue. A third driveway is located off Woolner Avenue leading to the gravel overflow parking lot. No site access is available on the east or west sides of the park. A road follows the north and east perimeter of the site connecting West Texas Street and Woolner Avenue. The park includes LED security lighting, security cameras, and loitering deterrents. Fencing is located along the majority of the north border as well as east and west of the site. Landscaping at the site includes 503 trees.

Project Components. Except for the Aquatics Complex, the Sports Center (gym), the existing skate park, little league fields, and an adult baseball field, the majority of the 48-acre park area would be renovated in phases. Specific elements of the planned renovation are described below, and shown on Figures 3 through 5.

Family Activity Area. The Family Activity Area is planned as a large gathering space for picnic and play. This area would be located near the parks' West Texas Street entrance. Amenities in this area would include: a large, multi-use field, sand volleyball court, fitness track loop, fitness course/senior fitness course, and all-inclusive play area. Both the pedestrian paths and fitness track loop would connect to the other major use areas. The multi-use field could also be used as a fourth softball field, as needed.

The All Inclusive Accessible Play Area would be a community-scale playground focused on providing an inclusive play experience for users of all abilities. The play area would be situated at the main entrance to the park along West Texas Street. A restroom building would be added nearby to serve the adjacent uses.

The Fitness Course/Senior Fitness Area is an arrangement of fitness equipment along the fitness track loop that provides an exercise circuit for the park users. The equipment ranges from mobility and stretching to challenging obstacles to test agility and strength. The area focuses on activities for ages ranging from teens to seniors but can serve users of all abilities.

KEYNOTE LEGEND

FAMILY ACTIVITY AREA

1. All Inclusive Play Area
2. Fitness Course/Senior Fitness

SPORTS COMPLEX

3. Batting Cages/Storage
4. Challenger Field (Artificial Turf)
5. Play Area
6. Existing Little League Baseball (2)
7. Softball Field (300')
8. Softball Field (225')
9. Multi-Use Artificial Turf Field
10. Adult Baseball (400')
11. Perimeter Fence
12. Small Shade Shelter
13. Concession Building
14. Practice Field

COMMUNITY GATHERING AREA

15. Plaza with Entry Arch
16. Large Shade Shelter
17. Multi-Use Field

SPORTS COURTS

18. Tennis Courts
19. Basketball Court
20. Pickleball Courts
21. Futsal and Soccer Court
22. Sand Volleyball

DOG PARK

23. Small Dog Park (1 acre)
24. Large Dog Park (3 acres)
25. Wall
26. Small Shade Shelter

OTHER

27. Parking Lot, typ.*
28. Restroom
29. Fitness Track Loop
30. Existing Skate Park
31. Maintenance Yard

PARKING

Existing Parking- 321 Stalls
Proposed Parking- 539 Stalls
Street Parking- 75 Stalls
Parking Requirements- 468 Stalls

SPORT FIELD SUMMARY

Qty.	Field Type
5	Baseball Fields
4	Softball Fields
1	Large Soccer Field (360'x 240')
5	Youth Soccer Fields(240'x 160')
1	Multi-use Field

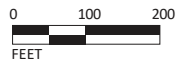
PARK ACREAGE SUMMARY

Total Park Acreage: 48 Acres



FIGURE 3

LSA



 Project Site

Allan Witt Community Park Renovation Project
Preferred Renovation Plan

SOURCE: CALLANDER ASSOCIATES LANDSCAPE ARCHITECTURE, 2018.

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MASTER PHASING PLAN

ALLAN WITT COMMUNITY PARK
03/20/18

PHASING LEGEND

KEY	PHASE	TIMING	COST
	1: SKATE PARK	2018	\$430,000
	2: DOG PARK	2018-2020	\$3.0 MILLION
	3: PLAY AREA	2018-2022	\$2.9 MILLION
	4: SOFTBALL FIELDS ***	2021-2022	\$8.1 MILLION
	5: COMMUNITY GATHERING AREA	TBD**	\$4.0 MILLION
	6: ARTIFICIAL SPORT FIELD	TBD**	\$6.3 MILLION
	7: SPORT COURTS	TBD**	\$3.0 MILLION
	8: LITTLE LEAGUE FIELDS	TBD**	\$3.4 MILLION

*ESTIMATES BASED ON 2017 VALUES.

** BALANCE OF IMPROVEMENTS ARE NOT PROJECTED IN THE CITY'S 5 YR BUDGET. IMPROVEMENTS MAY BE ADDED TO 5 YR PLAN IF FUNDING BECOMES AVAILABLE.

***5 YEAR PLAN INCLUDES CONSTRUCTION DOCUMENTS ONLY



LSA

FIGURE 4



Project Site

Allan Witt Community Park Renovation Project
Master Phasing Plan

SOURCE: CALLANDER ASSOCIATES LANDSCAPE ARCHITECTURE, 2019.

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5 YEAR RENOVATION PLAN

ALLAN WITT COMMUNITY PARK
03/20/18

PHASE 1 - SKATE PARK

- Remove Concessions Building
- Construct Interim Asphalt Police Access Road
- Construct Perimeter Fence and Gates
- Graffiti Removal

PHASE 2 - DOG PARK/ENTRY ENHANCEMENTS

- Small Dog Park (1 acre)
- Large Dog Park (3 acres)
- Small Shade Structure
- Parking Lot
- Roundabout
- Park Entry Sign
- Park Road Realignment

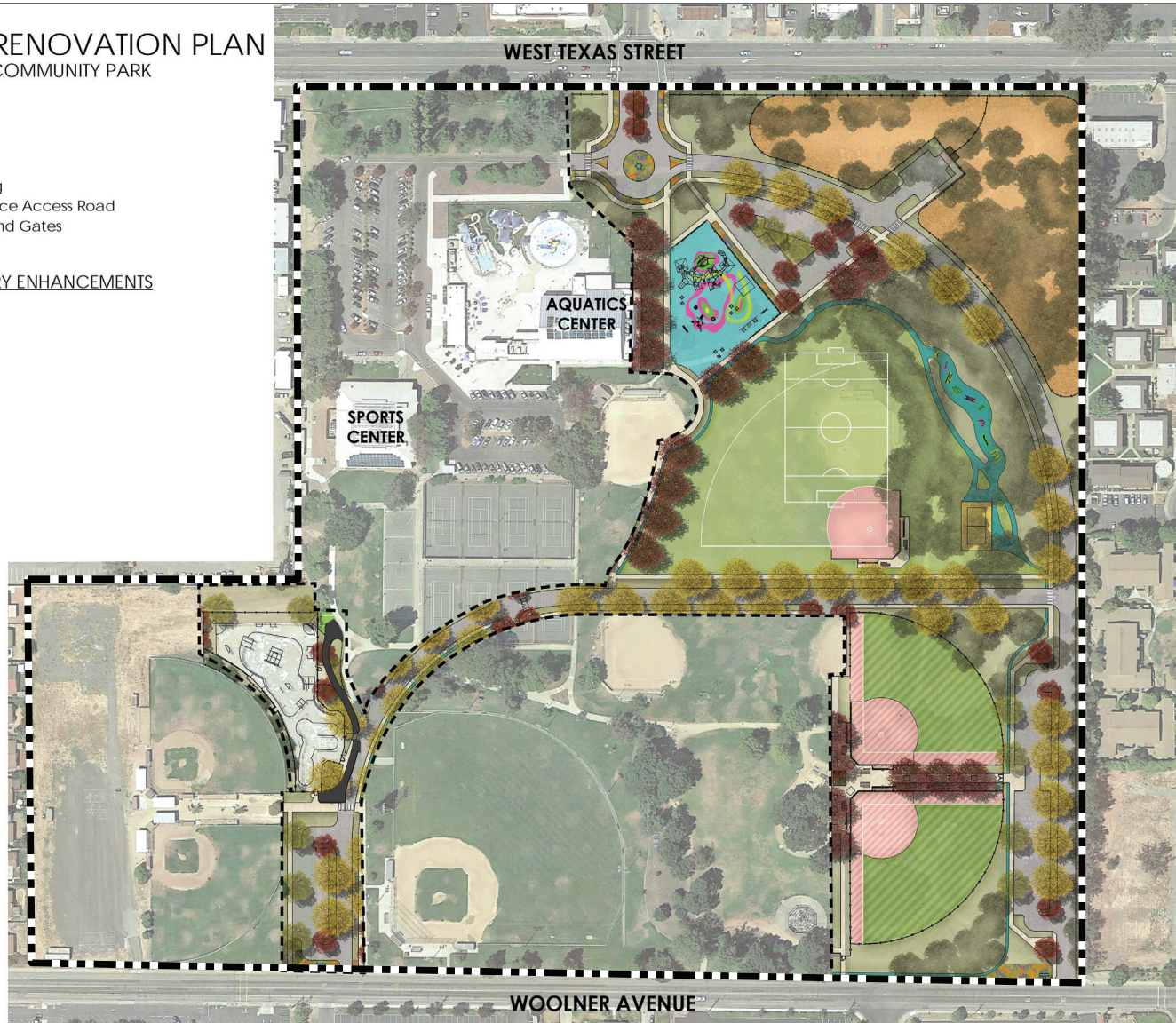
PHASE 3 - PLAY AREA

- All Inclusive Play Area
- Parking Lot
- Restroom
- Shade Structure/Picnic Area

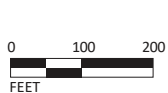
PHASE 4 - SOFTBALL FIELDS

- Softball Field (300'), typ.
- Softball Field (225')
- Parking Lot
- Fitness Course/Senior Fitness
- Fitness Track Loop
- Sand Volleyball
- Park Road Extension

--- Limits of 5 Year Renovation Plan



LSA



Project Site

FIGURE 5

Allan Witt Community Park Renovation Project
5-Year Renovation Plan

Sports Complex. The Sports Complex would consist of sports facilities for a wide range of active uses. The existing little league fields and adult baseball field would remain, with an additional “challenger” field¹ added that provides artificial turf for children with disabilities. Two designated youth softball fields would be installed, along with one multi-purpose, artificial turf field for softball, soccer and other sports. Fields would be oriented toward the street frontage to improve visibility into the sports areas. Additional parking would be provided in this area in order to accommodate vehicles coming to the site for tournaments.

Restrooms would be located within the sports complex. These restrooms would be located within the fence perimeter and only open when the facility is being used by organized groups.

A perimeter fence around the existing skate park would be installed with a controlled access point. Additional security lighting would also be installed.

Other amenities in this area would include a small playground within the little league area, batting cages and bullpens, storage facilities, concession areas, and shade shelters.

Community Gathering Area (Event Area). The Community Gathering Area is planned as a large gathering and events space. The amenities in this area would include: an entry plaza, large informal lawn, and multi-functional shade shelter that can serve as a stage, event, and picnic area. The area would host large community events, adjacent to the Sports Center and Aquatics Complex. Access to this area would be via a 10-foot wide pedestrian path from the parking lot north of the Sports Center. A new control access point between the Sports Center and the Aquatics Complex would be constructed to allow Parks’ staff to better monitor entries to the Sports Center and Aquatics Complex.

Sports Courts. The Sports Courts area would be located near the existing Sports Center and would be designed for both traditional and non-traditional court games, including tennis, basketball, pickleball and futsal. These courts would be located in approximately the same place as the existing courts, but re-oriented to improve visibility. Courts would be lit for evening use. The lighting would be set on a timer and would automatically turn off at 10:00 p.m. A new restroom would be installed near the park road. Parking for the Sports Courts would be from the north near the Sports Center or from the south off of the new park road.

Dog Park. The Dog Park would be split into two areas, one for large dogs and another for small dogs. The area would be fenced to allow voice-controlled dogs to be off leash. Amenities in this area would include: a small parking lot and entrance kiosk vestibule. Agility courses, alternate surfaces, shade, and other elements would be added to enhance use of the dog park.

Parking and Circulation. Existing parking at the project site consists of 321 on-site parking stalls in four primary parking areas: at the north entry along West Texas Street, just north of the Sports Center, along the eastern park boundary, and off Woolner Avenue. Informal parking is provided in a gravel area west of the existing little league fields (not included in the 321 count)

¹ A challenger field is a baseball field designed for youth with special needs. With an artificial turf surface and other solid surfaces, it is designed for easy mobility and wheelchair access.

and on-street parking is available along Woolner Avenue (also not counted in the 321 count). As part of the proposed project, parking capacity would be expanded to 539 on-site parking stalls (218 additional parking stalls). Parking areas would be located in approximately the same four locations.

A vehicle roundabout is proposed at the West Texas Street park entrance. The existing park road that runs along the eastern boundary of the park would be re-aligned to accommodate the planned dog park. A new internal vehicle access road and Class I Bike Trail would be constructed, connecting the eastern internal park road from West Texas Street to Woolner Avenue. The project would also construct additional bike paths to enhance activity within the park and to provide connectivity to other areas of downtown. Bike racks would also be provided within the park as part of the proposed project.

Landscaping. Landscaping in the park includes 503 existing trees. The existing mature tree canopy at the park is a significant contributor to the park's character; however, many of the site's trees are in need of removal or pruning. The Arborist Report prepared for the project recommended that 72 trees be removed due to health and safety concerns, with an additional 370 trees in need of corrective work and/or improved growing conditions to be retained.

As part of the proposed project, some of the trees would be removed to accommodate planned amenities, road realignments, and parking lots. Trees removed as a result of the proposed project, which are not already recommended for removal, would be replaced at a ratio of 1:1. Trees identified for removal would be removed in phases consistent with project phasing, as well as the City's ongoing tree maintenance at the park and in compliance with the City's tree ordinance.

Other landscaping at the site includes lawn areas and planter beds with large shrubs. Through the phases of the project, the overall lawn area would be reduced to areas with programmed recreation space. Other landscaped areas would be designed for low water use and use climate appropriate plants.

Lighting. Additional LED pathway safety lighting, fixtures, and poles would be installed along pathways and parking lots for security lighting. Security cameras would also be installed and/or relocated. New lights at the sports fields would also be installed to accommodate night use of the fields. The sports field lights would be used until 10:00 p.m. (Sunday through Thursday) and 11:00 p.m. (Friday and Saturday). Approximately 14 lights ranging in height from 70 to 80 feet would be installed at the two new softball fields and approximately 12 lights would be installed at the multi-use field. Lights would also be installed at the sports courts. Lights would be placed on a timed controller and would not be used past the hour of 10:00 p.m. (Sunday through Thursday) and 11:00 p.m. (Friday and Saturday).

Drainage and Utilities. Since most areas of the park would be re-graded to improve drainage and to allow for the planned roadway, field, and park amenity improvements, most of the drainage pipes and collection structures within the park would need to be removed and replaced in a new configuration. Existing storm drain piping would be removed and replaced with new piping in a new configuration. New storm drain laterals would be installed at the north, central, and

southwestern areas of the park connecting to existing pipes. New pipes along the south and east sections of the park would be installed and would drain to the southeast storm drain connection. Twin parallel storm drains currently run from north to south along the west side of the park, which as drainage conveyance pipes for most of the park, would remain in place.

Approximately 25 bioretention swales, with a total area of approximately 12,000 square feet, would be constructed to treat runoff from impervious surface areas including the driveways and parking lots. Pipes and drains would be constructed under the swales to discharge treated water from the bioretention swales into the new storm drain pipes.

Existing connections to public sewer and water systems would remain. Approximately 1,600 linear feet of existing pipeline in the park would be replaced with new pipelines, and would connect to the new concession facility, restrooms, and drinking fountains. Existing water and sewer pipes serving the existing athletic building and aquatics complex would remain.

Consistent with City standards, potable water lines would be installed approximately 48 inches below ground surface (bgs). Sanitary sewer lines would be installed a minimum of 60 inches bgs. Irrigation lines would be 12 to 24-inches deep and storm drains would require a minimum of 2 feet of ground cover.

Electrical utilities have been upgraded over time as park safety lighting has been added to the site. Additional or upgraded electrical service could be required for facilities such as the restrooms, sport field lighting, and Community Gathering/Event Area.

Operation. Similar to existing conditions, the park would provide recreation opportunities to the community, including a variety of large and small-scale events. The park would be open daily to informal use, including walking, biking, picnicking, pick-up sports and use of general park facilities. The park hours are dawn to dusk. Courts and fields with lighting would have extended hours until 10:00 p.m. (Sunday through Thursday) and 11:00 p.m. (Friday and Saturday). The existing Sports Center is open 8:00 a.m. to 9:00 p.m. and the Aquatics Complex is open 8:00 a.m. to 8:00 p.m. Table 1 shows the existing and planned amenities at Allan Witt Community Park and their anticipated level of use.

The park would continue to host a variety of programs, ranging from family picnics to large-scale sports tournaments. The Community Gathering area would host events such as concerts, festivals, performances, movies in the park, as well as reunions, picnics and parties. The large shade shelter would be equipped with infrastructure to accommodate musical equipment, performance lighting and video screens.

Community events would include small-scale events, like movie nights with attendance as small as 100 people, but would also include festivals with up to 5,000 people. In the event of a festival, the park would be used exclusively for the event. No other field uses, picnic rentals, or facility rentals would be allowed concurrently. In the event of a festival, an off-site parking plan with shuttle services would be in place for the event. Large events would likely not occur more than twice a year.

Table 1: Matrix of Allan Witt Park Amenities

Recreational Amenity	Existing /New	Attendance per event	Events per year	Annual Use	Weekday Use (total daily)	Hours of Use	Weekend Use (total daily)	Hours of Use
Futsal Soccer Field (#21)	N	20	5	Aug-Jan	20	Evenings	100	Mornings/ Afternoons
All Inclusive Playground (#5) ¹	N	20	365	Jan-Dec	20	All day	50	All day
Little League Field 1 (#6)	E	100	4	Feb-Jul, Sept-Oct	100	Evenings	100	Mornings/ Afternoons
Little League Field 2 (#6)	E	100	4	Feb-Jul, Sept-Oct	100	Evenings	100	Mornings/ Afternoons
Softball Field/Multi-Use Field (Adult) (#7, #17)	N	50	6	Jan-Dec	50	Evenings	300	All Day
Softball Field 1 (#8) ²	E	100	4	Feb-Jul, Sept-Oct	100	Evenings	400	Mornings/ Afternoons
Softball Field 2 (#8) ²	E	100	4	Feb-Jul, Sept-Oct	100	Evenings	400	Mornings/ Afternoons
Multi-Use Artificial Turf Field (#9)	N	50	5	Jan-Dec			250	All Day
Baseball Field 5 (#10)	E	50	5	Feb-Oct, Dec	30	Evenings	250	All Day
Soccer Field (outfield of Baseball Field 5)	E	50	5	Jan, Sept-Dec	50	Evenings	250	Morning/ Afternoons
Challenger Little League Baseball Field	N	20	5	Feb-Jul	20	Evenings	100	Mornings/ Afternoons
Tennis Courts (#18) ³	E	14	7	Jan-Dec	100	All Day	100	All Day
Basketball Courts (#19)	E	14	7	Jan-Dec	100	All Day	100	All Day
Pickle Ball Courts (#20)	N	4	7	Jan-Dec	20	All Day	25	All Day
Sand Volleyball Courts (#21)	E	4	7	Jan-Dec	25	Evenings	25	All Day
Small Dog Park (#22)	N	7	7	Jan-Dec	50	All Day	50	All Day
Large Dog Park (#23)	N	7	7	Jan-Dec	50	All Day	50	All Day
Sports Center ⁴	E	63	4	Jan-Dec	63	Mornings/ Afternoons	N/A	N/A
Aquatics Complex (Summer Hours) ⁵	E	700	2	May-Aug	N/A	N/A	700	All Day
Aquatics Complex (Winter Hours)	E	50	7	Jan-Apr, Sept-Dec	50	All Day	50	Mornings/ Afternoons

Source: Callander Associates (2019).

¹ Replaces two smaller playgrounds at the north and south side of the park.

² One field moved; one field removed.

³ Four new courts planned; eight courts removed.

⁴ Hours of Operation: Monday through Thursday, 8:00 a.m. – noon; 1:00 p.m. – 9:00 p.m.

⁵ Summer Hours of Operation (May 25-September 3): Sunday through Saturday, 8:00 a.m. – 8:00 p.m.

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The little league fields are used typically from February thru October. Practices and games are held on weekday evenings, and games held on Saturday mornings and afternoons.

The adult baseball field (also known as Field 5) is used by youth ages 13 and above, including Babe Ruth Baseball, high school teams and adult teams. The adult baseball field would be used on weekday evenings from 4:30 p.m. until 10:00 p.m. for practices and games (either two practices or two games each weekday evening). Games are played on Saturdays and Sundays beginning at 8:30 a.m. and continuing until 10:00 p.m. on Saturdays (five games total), and beginning at 8:30 a.m. and continuing until 10:00 p.m. on Sundays (4 games total). Games and practices can extend until 11:00 p.m. on Fridays and Saturdays. An estimated 100 people, including team members and spectators, would visit the park for each weekend game, totaling 500 people on Saturday and 400 people on Sunday.

The four new tennis courts would be used for games and practices during normal park hours (dawn to dusk) during the week and weekends.

The new four court pickleball facility usage would be weekdays and weekends. Due to the current demographics for pickleball players, the courts would be used during business hours and evenings. The courts could accommodate tournament play on weekends.

Maintenance activities would be similar to existing conditions and would be performed by existing City of Fairfield Public Works and Parks and Recreation staff and maintenance contractors hired by the City. Maintenance activities include mowing, facility cleaning, vegetation management, tree care and maintenance of recreation facilities. Maintenance of the sports fields would also continue to be conducted by the various leagues that use these fields.

Construction. The renovation plan project would be constructed in four phases, as shown on Figure 4 and described below:

- **Phase 1:** Construct interim police access road near skate park, remove graffiti from skate surface, add controlled access fence, and demolition of restroom/concession stand.
- **Phase 2:** Construct the two dog parks, parking lot, sidewalks and roundabout. Install the park entry sign and construct park road realignment and Class I bike lane.
- **Phase 3:** Construct the all-inclusive play area, parking lot, sidewalks, restroom, and picnic area/shade structures.
- **Phase 4:** Develop contract documents for the softball fields, parking lot, sidewalks, fitness courses and fitness track loop, volleyball court and park road extension and Class I Bike Lane.

Construction on Phase 1 would commence in April 2019 and would extend for approximately six (6) months. Phase 2 is anticipated to start construction in February 2020 and extend for approximately six (6) months. Phase 3 is anticipated to start construction in summer 2021. Construction hours would occur during daylight hours, from approximately 8:00 a.m. to 5:00 p.m. daily. Construction staging would occur on the project site in areas not proposed to support planned improvements. Construction workers, equipment and deliveries would access the site via West Texas Street and/or Woolner Avenue.

The planned new buildings at the site would be supported by conventional shallow foundations with interior concrete slabs-on-grade. Shade structures would likely be supported on cast-in-drilled-hole (CIDH) concrete piers. Pavements would likely consist of asphalt concrete (AC) and/or rigid Portland cement concrete (PCC) pavement. As described above, most areas of the park would be re-graded to improve drainage and to allow for the planned roadway, field, and park amenity improvements. It is anticipated that on average five feet of cut and fill would be required. Additional depth would be cut for utility trenches, building foundations and onsite storm water treatment, as described above.

9. Surrounding Land Uses and Setting:

The site is bounded by West Texas Street to the north and Woolner Avenue to the south. Adjacent land uses include a Caltrans corporation yard and single-family housing to the west, and multi-family housing and commercial uses to the east. Commercial uses are located north of West Texas Street, and school, religious, and commercial uses are located south of Woolner Avenue. A vacant parcel, formerly occupied by a water treatment plant, is located at the corner of Gregory and Woolner.

Most areas of the site are level, and the average slope across the park is 0.5 percent. Most fields, courts, and parking areas are graded to drain at approximately 1 percent. The softball fields in the center of the site, and the picnic and playground areas at the northeast corner of the site are flat and have poor drainage. A site survey revealed that storm drains in this area are clogged with debris. Standing water in this area suggests the existing drainage system is inadequate to convey storm water away from these areas.

10. Other Public Agencies Whose Approval is Required (i.e., permits, financial approval, or participation agreements):

- City of Fairfield – Ministerial Permits (e.g., Building Permit, Grading Permit)
- State Water Resources Control Board (SWRCB) Construction General Permit for Discharges of Stormwater Associated with Construction Activity
- Bay Area Air Quality Management District (BAAQMD) Authority to Construct and Permit to Operate

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, has consultation begun?

On September 6, 2018, the City provided formal notification to those California Native American tribes that are traditionally and culturally affiliated with the geographic area within which the proposed project is located pursuant to the consultation requirements of AB 52. On October 3, 2018, Mr. Leland Kitner, Tribal Historic Preservation Office of the Yocha Dehe Wintun Nation, responded via letter. The letter indicates that the project is located within the aboriginal territories of the Yocha Dehe Wintun Nation. Mr. Kitner indicated that the tribe had concerns that the project could impact known archaeological/cultural sites and requested a copy of the cultural study.

2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” or “Less Than Significant with Mitigation” as indicated by the checklist in Chapter 3.0.

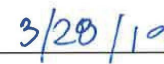
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|--|---|--|
| ☐ Aesthetics | ☐ Agriculture and Forestry Resources | ☒ Air Quality |
| ☒ Biological Resources | ☒ Cultural Resources | ☐ Geology/Soils |
| ☐ Greenhouse Gas Emissions | ☒ Hazards & Hazardous Materials | ☐ Hydrology/Water Quality |
| ☐ Land Use/Planning | ☐ Mineral Resources | ☒ Noise |
| ☐ Population/Housing | ☐ Public Services | ☐ Recreation |
| ☒ Transportation/Traffic | ☐ Tribal Cultural Resources | ☐ Utilities/Service Systems |
| ☒ Mandatory Findings of Significance | | |

2.1 DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “Potentially Significant Impact” or “Potentially Significant Unless Mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Amy Kreimeier / Associate Planner
City of Fairfield Community Development Department


Date

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3.0 CEQA ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Impact Analysis

a. *Would the project have a substantial effect on a scenic vista? (No Impact)*

According to the City of Fairfield Scenic Vista and Roadways Plan (1999), the project site is not located within an area designated as a Scenic Vista Area, or Scenic Roadway.² The project site is relatively flat and the surrounding area is developed with commercial and residential land uses allowing for limited views of the surrounding landscape.

The proposed project would result in the renovation of the existing Allan Witt Community Park with a community gathering area, family activity area, all-inclusive accessible play area, sports complex, sports courts, dog parks, and parking and circulation areas. The existing Aquatics Complex, Sports Center, skate park, little league fields, and baseball fields would remain.

None of the visual changes that would result from implementation of the planned park improvements would have a substantial adverse effect on a scenic vista. Planned improvements (including new facilities, landscaping, and parking and circulation areas) would be generally low profile and would not block views. The most evident new feature within the viewshed would be the updated sports field lights, which would extend approximately 70-80 feet high. These poles would be readily visible around the perimeter of the fields during daytime hours. However, due to their slender, vertical appearance, they would not be of such physical prominence that their presence would significantly affect a scenic vista. In addition, the planned field lights would be consistent in visual character with the existing facilities at Allan Witt Community Park, including the existing field lighting.

Construction of planned improvements would require removal of some existing trees and other vegetation. However, impacts on visual character and quality of the site from tree/vegetation

² Fairfield, City of, 1999. *City of Fairfield Scenic Vistas and Roadways Plan*. June 15.

removal are expected to be less than significant. The majority of trees to be removed are in poor health and/or pose safety concerns. The proposed project would include installation of landscaping, renovation of existing facilities, and construction of new facilities that would result in a beneficial visual impact at the project site.

During construction of planned improvements, additional vehicles, workers, and materials coming to and from the site, and site preparation activities would be visible from travelers along adjacent roadways and from adjacent uses. However, construction activities would occur within the existing park and would be intermittent and of relatively short duration.

Planned improvements would not include any tall structures or landscaping that would reduce, obstruct or degrade scenic vistas. Therefore, the proposed project would have a less than significant impact on scenic vistas.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No Impact)

No officially designated State scenic highways are located in Solano County. The nearest eligible State scenic highway to the project site is State Route 37, which is located near Vallejo, approximately 13 miles southwest.³ Given this distance, the project site would not be visible from this scenic roadway. As described in Section 3.1.1.a., the project site is not located adjacent to any locally designated Scenic Roadways. Therefore, the proposed project would not affect scenic resources within view of a State or local scenic highway, and there would be no impact.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings? (Less Than Significant Impact)

Implementation of the proposed project would result in the following visual changes to the project site:

- Renovation and construction of recreation facilities, including new dog parks, access roads, parking lots, sports complex, play area, restrooms, and picnic/shade structures.
- Installation of new pathway, parking lot and security lighting, as well as light standards up to 80 feet high for the sports fields.
- Landscape changes to the site, including renovation of existing turf areas, removal of trees (including 72 trees in poor condition) to accommodate planned improvements, and planting of new landscaping and shade trees.

Located in a developed area of Fairfield within an existing park, the planned improvements are appropriate for this location and would be visually compatible with the character of the park and its

³ California, State of, 2011. Department of Transportation, California Scenic Highway System. Website: www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm (accessed March 29, 2019).

surroundings. Therefore, the visual character of the site would not be degraded because the site would maintain its existing character as a park with active recreation facilities (e.g., sports fields).

Changes to the site that would occur as a result of project implementation are expected to result in an overall benefit to the visual quality of the site. Removal of diseased trees and the planting of new trees and other landscaping is intended to retain and improve the natural appeal of the area.

Planned circulation improvements (e.g., parking areas and roads) would improve the accessibility of the entire park. Pavement that is currently cracked or damaged would be replaced with reinforced concrete paving and other facilities (e.g., fields) would be renovated and improved.

The project proposes park and recreation improvements within an existing City park that currently provides opportunities for active recreation (e.g., sports fields, skate park, aquatic center, etc.). Planned improvements would be consistent with the existing visual character of the park and adjacent development, planned improvements would not block any protected or natural scenic view (as described above in Response 3.1.a). Therefore, the proposed project would not substantially degrade the existing visual character of the site or the surrounding area. This impact would be less than significant and no mitigation is required.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Less Than Significant)

The project site is located within a developed area and includes existing lighting, including lights at the existing sports fields. Streetlights, security lighting, sports fields lighting, vehicle head and tail lights on area roadways, and lighting associated with adjacent development are the existing sources of light and glare in the vicinity of the project site. The proposed project would include the renovation of the existing Allan Witt Community Park. Similar to existing conditions, park hours would be dawn until dusk, with courts and fields with lighting having extended hours until 10:00 p.m. (Sunday through Thursday) and 11:00 p.m. (Friday and Saturday). A total of 14 new lights ranging in height from 70 to 80 feet would be installed at the two new softball fields and 12 of the same height would be installed at the multi-use fields. Some of these new lights would replace some of the existing lights based on the reconfiguration of planned amenities. Lights would be placed on a timed controller and would not be used past the hour of 10:00 p.m. Sunday through Thursday) and 11:00 p.m. (Friday and Saturday).

Section 25.30.4 of the City of Fairfield Municipal Code (2018) requires that all lighting be shielded or recessed so that light, glare, and reflections are confined to the maximum extent feasible within the boundaries of the site. Consistent with the policies outlined in the City's Municipal Code, each light fixture would be directed downward and away from adjoining properties and public right of way, so that no on-site light fixture would directly illuminate any off-site areas.

With adherence to these requirements, and because the project site currently contains similar lighting for the softball/multi-purpose fields and baseball fields, the proposed project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. This impact would be less than significant.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. 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 conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Impact Analysis

- a. *Would the project 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? (No Impact)*

The existing park is located within an urbanized area of the City. No agricultural uses are located within or adjacent to the project site. Additionally, the project area is classified as "Urban and Built-Up Land" by the State Department of Conservation.⁴ Therefore, the proposed project would not involve the conversion of agricultural land to a non-agricultural use. The proposed project would not

⁴ California, State of, 2016. Department of Conservation. California Important Farmland Finder. Website: maps.conservation.ca.gov/dlrp/ciff (accessed March 29, 2019).

result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and there would be no impact.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? (No Impact)

The project site is zoned REC (Recreation) on the City's zoning map.⁵ The project area is not subject to a Williamson Act contract.⁶ Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and the proposed project would have no impact.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? (No Impact)

The project site is located within an existing urban area and is zoned REC on the City's zoning map. The proposed project would not conflict with the existing zoning for, or cause rezoning of, forest land or conversion of forest land to non-forest uses. Therefore, the proposed project would have no impact related to forest land, timberland, or timberland zoned Timberland Production.

d. Would the project result in the loss of forest land or conversion of forestland to non-forest use? (No Impact)

Refer to Section 4.2.1.c. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest uses. Therefore, the proposed project would have no impact related to loss of forest land or conversion of forest land.

e. Would the project 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 conversion of forest land to non-forest use? (No Impact)

Refer to Sections 4.2.1.a and 4.2.1.c. The project area is located within an existing urban environment and would not result in the extension of infrastructure into an undeveloped area, the development of urban uses on a previously undeveloped greenfield site, or other physical changes that would result in the conversion of farmland to non-agricultural uses or forest land to non-forest uses. The proposed project would not adversely affect agricultural or forestry resources.

⁵ Fairfield, City of, 2016. Interactive Zoning Map. Website: <http://fairfield.maps.arcgis.com/apps/webappviewer/index.html?id=2631cd4c79da4c6099c6e0a4ded9a172> (accessed March 29, 2019).

⁶ California, State of, 2013. Solano County Williamson Act FY 2013/2014 (Map).

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Impact Analysis

The proposed project is located in the City of Fairfield, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Fairfield, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM₁₀, PM_{2.5}), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM_{2.5} 24-hour standard.

*a. Would the project conflict with or obstruct implementation of the applicable air quality plan?
(Less Than Significant Impact)*

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),⁷ adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient

⁷ Bay Area Air Quality Management District, 2017. *Clean Air Plan*. April 19.

concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Clean Air Plan Goals. The primary goals of the Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed in Section 3.3.1b, implementation of the proposed project would result in less-than-significant operation-period emissions and, with implementation of Mitigation Measure AIR-1, the project would result in less-than-significant construction-period emissions. Therefore, the project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-GHG Pollutants Measures.

Stationary Source Control Measures. The stationary source measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD's Permit and Inspection programs. Since the project would not include any stationary sources, the Stationary Source Measures of the Clean Air Plan are not applicable to the project.

Transportation Control Measures. The BAAQMD identifies Transportation Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed project would renovate an existing park to improve safety, visibility, and upgrade existing park recreation facilities in need of refurbishment and repair, as well as add new recreation opportunities. The proposed project is not expected to result in a significant increase in the generation of vehicle trips or vehicle miles traveled. In addition, the project site is located within walking or cycling distance from the surrounding residential area, and therefore would support the ability of visitors to use alternative modes of transportation. Therefore, the project would not hinder the BAAQMD's initiatives to reduce vehicle trips and vehicle miles traveled.

Energy Control Measures. The Clean Air Plan also includes Energy Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by

switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the Clean Air Plan are not applicable to the project.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The project would renovate an existing park and would not conflict with the Building Control Measures.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane. Since the Project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the project.

Waste Management Control Measures. The Waste Management Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the project.

Super GHG Control Measures. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the project.

Clean Air Plan Implementation. As discussed above, implementation of the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan and this impact would be less than significant.

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Less Than Significant with Mitigation)

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants: CO, ozone (O₃), NO₂, SO₂, Pb, and suspended particulate matter (PM). These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. As identified above, the BAAQMD is under State non-attainment status for ozone, PM₁₀, and PM_{2.5} standards. The Air Basin is also classified as non-attainment for both the federal ozone 8-hour standard and the federal PM_{2.5} 24-hour standard.

Air quality standards for the proposed project are regulated by the BAAQMD CEQA Air Quality Guidelines. According to the BAAQMD CEQA Air Quality Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the project must not:

- Contribute to CO concentrations exceeding the State ambient air quality standards;
- Generate average daily construction emissions of reactive organic gases (ROG), NO_x or PM_{2.5} greater than 54 pounds per day or PM₁₀ exhaust emissions greater than 82 pounds per day; or
- Generate average operational emissions of ROG, NO_x or PM_{2.5} of greater than 10 tons per year or 54 pounds per day or PM₁₀ emissions greater than 15 tons per year or 82 pounds per day.

The following sections describe the proposed project's construction- and operation-related air quality impacts and CO impacts.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by grading, paving, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter (PM_{2.5} and PM₁₀), and TACs such as diesel exhaust particulate matter.

Project construction activities would include grading, paving, and some building activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM₁₀). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, volatile organic compounds (VOCs) and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, consistent with BAAQMD recommendations. As discussed in the Project Description, the proposed project would be constructed in four phases over a 5-year period. Construction of Phase 1 would commence in April 2019 and would extend for approximately 6 months. Other construction details are not yet known; therefore, default assumptions (e.g., construction of future phases and construction fleet activities) from CalEEMod were used. For purposes of this analysis, the construction schedule was assumed to be 5 years. Construction-related emissions are presented in Table 2. CalEEMod output sheets are included in Appendix A.

Table 2: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO _x	Exhaust PM ₁₀	Fugitive Dust PM ₁₀	Exhaust PM _{2.5}	Fugitive Dust PM _{2.5}
Average Daily Emissions	0.4	3.5	0.2	0.6	0.2	0.3
BAAQMD Thresholds	54.0	54.0	54.0	BMP	82.0	BMP
Exceed Threshold?	No	No	No	No	No	No

Source: LSA (January 2019).

BMP = best management practices

As shown in Table 2, construction emissions associated with the project would be less than significant for ROG, NO_x, PM_{2.5}, and PM₁₀ exhaust emissions. The BAAQMD requires the implementation of the BAAQMD's Basic Construction Mitigation Measures to reduce construction fugitive dust impacts to a less-than-significant level as follows:

Mitigation Measure AIR-1:

Fugitive Dust Control Measures. In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented during construction activities:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day during construction activities.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the City of Fairfield regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

Operational Air Quality Emissions. Long-term air pollutant emission impacts are those associated with area sources and mobile sources related to the proposed project. In addition to the short-term construction emissions, the project would also generate long-term air pollutant emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as landscape equipment would also result in pollutant emissions.

PM₁₀ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM₁₀ occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Typically, energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or cooking equipment. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions.

The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The proposed project would generate a minimal amount of energy source emissions which would primarily be associated with lighting.

Area source emissions associated with the project would include emissions from the use of landscaping equipment.

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 3. Trip generation rates for the project were based on the recreation amenity use matrix to account for the various programmed activities on-site, which indicates that the project would generate approximately 329 net new trips on weekdays and approximately 1,088 net new trips on weekends.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project emissions are released in other areas of the Air Basin. The daily emissions associated with project operational trip generation, energy, and area sources are identified in Table 3 for ROG, NO_x, PM₁₀, and PM_{2.5}. The results shown in Table 3 indicate the project would not exceed the significance criteria for daily ROG, NO_x, PM₁₀ or PM_{2.5} emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required. This impact would be less than significant.

Table 3: Project Operational Emissions

	ROG	NO _x	PM ₁₀	PM _{2.5}
Pounds Per Day				
Area Source Emissions	0.2	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0
Mobile Source Emissions	1.4	5.7	4.9	1.3
Total Emissions	1.7	5.7	4.9	1.3
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	No	No	No	No
Tons Per Year				
Area Source Emissions	0.0	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0
Mobile Source Emissions	0.1	0.5	0.4	0.1
Total Emissions	0.2	0.5	0.4	0.1
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceed Threshold?	No	No	No	No

Source: LSA (January 2019).

Localized CO Impacts. The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans;
- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

The proposed project would not conflict with standards established by the Solano Transportation Authority (STA) for designated roads and highways, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air is substantially limited. Based on the Trip Generation Analysis⁸, the proposed project would generate approximately 45 trips in the AM peak hour and approximately 211 trips in the PM peak hour. Therefore, the project's contribution to peak hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. The proposed project would not result in localized CO concentrations that exceed State or federal standards and this impact would be less than significant.

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? (Less Than Significant Impact)

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable, or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact.

As discussed above, implementation of the proposed project would generate less than significant operational emissions. As shown in the project-specific air quality impacts discussion above, the proposed project would not result in individually significant impacts and therefore would not make a cumulatively considerable contribution to regional air quality impacts. This impact would be considered less than significant.

⁸ Fehr & Peers, 2018. *Draft Project Trip Generation Analysis for the Allan Witt Park Renovation Project in Fairfield, California*. December 18.

d. Would the project expose sensitive receptors to substantial pollutant concentrations? (Less Than Significant Impact)

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure to diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks. The closest sensitive receptors to the proposed project include the single-family residences located immediately west of the project site and the multi-family residences located immediately east of the project site.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million; increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute); or an annual average ambient PM_{2.5} increase greater than 0.3 micrograms per cubic meter (µg/m³). A significant cumulative impact would occur if the project, in combination with other projects located within a 1,000-foot radius of the project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million; an increased non-cancer risk of greater than 10.0 on the hazard index (chronic); or an ambient PM_{2.5} increase greater than 0.8 µg/m³ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement Mitigation Measure AIR-1 described above. With implementation of this mitigation measure, project construction pollutant emissions would be below the BAAQMD significance thresholds. Once the project is constructed, the project would not be a source of substantial pollutant emissions. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during project construction and operation, and potential impacts would be considered less than significant.

e. Would the project create objectionable odors affecting a substantial number of people? (Less Than Significant Impact)

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people. This impact would be less than significant.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.4.1 Impact Analysis

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Less Than Significant with Mitigation)*

The project site is entirely within the built environment of the City of Fairfield and contains no sensitive or native habitat. The proposed project consists of removing the existing asphalt driveway, installing a dog park, complete with fencing and signage, and replacing the existing lawn with a substrate such as bark mulch etc. As part of the proposed project, some of the trees would be removed to accommodate planned amenities, road realignments, and parking lots. Trees removed as a result of the proposed project, which are not already recommended for removal, would be replaced at a ratio of 1:1. Trees identified for removal would be removed in phases consistent with project phasing, as well as the City's ongoing tree maintenance practices at the park and in compliance with the City's tree ordinance.

Special Status Species⁹: Special status species include species, subspecies, or Evolutionarily Significant Units (ESU) where at least one of the following conditions applies:

- Officially listed or proposed for listing under the State and/or Federal Endangered Species Acts;
- Taxa considered by the Department to be a Species of Special Concern (SSC);
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines (more information on CEQA is available at: <http://resources.ca.gov/ceqa/guidelines>);
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California;
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.);
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or a non-governmental organization (NGO) and determined by the CNDDDB to be rare, restricted, declining, or threatened across their range in California.

The CNDDDB database lists three special-status mammals, three special-status birds and nine special status plant species that are presumed extant within 1 mile of the site (Table 4). With the exception of hoary bat, none of the species identified by the CNDDDB are expected to be present at the project site, since they require specialized habitats (e.g., vernal pool grasslands, agricultural lands, or marsh) that are not present at this urban park site. No special-status plant or wildlife species were observed during the site visit conducted by LSA.

Protected Species: The project area contains a number of large, mature trees and shrubs that provide habitat for various birds and small mammals. During Phase 1 and 2 (upgrade of the skate park and creation of the dog park) several trees would need to be removed to construct the new driveway, and dog park access. Most of these trees are large enough to provide valuable shelter and nesting habitat for a variety of resident and migratory bird species occurring in the region (e.g., scrub jay, Northern mocking bird, American crow, collared dove, and mourning dove). Given the highly urbanized nature of the surrounding area, it is likely that such landscape features are of value to these species as little other cover is available in the surrounding urban environment.

⁹ California Department of Fish and Wildlife, Natural Diversity Database. August 2018. Special Animals List. Periodic publication. 66 pp.

Table 4: Special-Status Species Within 1 Mile of the Project Site

Species	Federal Status	State Status	State Rank	Rare Plant Rank	CDFW Status
Suisun shrew <i>Sorex ornatus sinuosus</i>	None	None	S1S2		SSC
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	Endangered	Endangered	S1S2		FP
Hoary bat <i>Lasiurus cinereus</i>	None	None	S4		
Burrowing owl <i>Athene cunicularia</i>	None	None	S3		SSC
Suisun song sparrow <i>Melospiza melodia maxillaris</i>	None	None	S3		SSC
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	None	None	S3		SSC
Mt. Diablo buckwheat <i>Eriogonum truncatum</i>	None	None	S1	1B.1	
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>Parryi</i>	None	None	S2	1b.2	
Slender-leaved pondweed <i>Stuckenia filiformis</i> ssp. <i>Alpina</i>	None	None	S2s3	2b.2	
Contra Costa goldfields <i>Lasthenia conjugens</i>	Endangered	None	S1	1B.1	
Alkali milk-vetch <i>Astragalus tener</i> var. <i>Tener</i>	None	None	S2	1b.2	
Suisun Marsh aster <i>Symphyotrichum lentum</i>	None	None	S2	1B.2	
Saline clover <i>Trifolium hydrophilum</i>	None	None	S2	1b.2	
California alkali grass <i>Puccinellia simplex</i>	None	None	S2	1B.2	
Long-styled sand-spurrey <i>Spergularia macrotheca</i> var. <i>Longistyla</i>	None	None	S2	1b.2	

Source: California Department of Fish and Wildlife, Natural Diversity Database (August 2018).

Status explanations:

Federal:

E = listed as endangered under the federal Endangered Species Act.

T = listed as threatened under the federal Endangered Species Act.

– = No status definition.

State:

E = listed as endangered under the California Endangered Species Act.

R - listed as rare under the California Native Plant Protection Act.

– = No status definition

CDFW:

SSC = Species of special concern

FP = Fully protected

California Native Plant Society:

1A = List 1A species: presumed extinct in California.

1B = List 1B species: rare, threatened, or endangered in California and elsewhere.

2 = List 2 species: rare, threatened, or endangered in California but more common elsewhere.

CNPS Code Extensions:

.1 = seriously endangered in California (over 80% of occurrences threatened /high degree and immediacy of threat)

.2 = fairly endangered in California (20- 80% of occurrences threatened)

Although the species likely to use these trees are considered common and widespread, their active nests are protected from removal by a variety of state and federal laws including California Fish and Game Code Sections 3503, 3503.5, and 3513 and the Migratory Bird Treaty Act. No nests were observed in the trees during the site survey conducted on September 28, 2018. Foraging habitat for Swainson's hawk and white-tailed kite (e.g., grasslands with sufficient fossorial prey base) is not available in the project area or adjacent undeveloped parcels.

If construction during Phase 1 or Phase 2 occurs within the nesting season, potential disturbance or loss of nesting birds protected under California Fish and Game Code Sections 3503, 3503.5, and 3513 and the Migratory Bird Treaty Act could occur as a result of construction activity. Implementation of Mitigation Measure BIO-1 would reduce this impact to less than significant by first identifying the presence or absence of active migratory bird nests, and if present, preventing the loss of eggs or young.

Mitigation Measure BIO-1: Nesting Bird Protection Measures. The City shall schedule tree and vegetation removal activities to occur outside the nesting period of migratory birds, from September 1 through January 31 of each given year. If construction, vegetation removal, or ground disturbance activities occur during the breeding season (February 1 - August 31), pre-construction breeding bird surveys shall be conducted within 14 days of the start of these activities to avoid disturbance to active nests, eggs, and/or young. If construction, vegetation removal, or ground disturbance activities stop or lapse for a period of 14 days or more during the breeding season, a follow-up breeding bird survey shall be conducted to ensure no new breeding activity has occurred for the anticipated impacted area. Outside of the breeding season, no pre-construction breeding bird survey would be required for construction, vegetation removal, or ground disturbance activities. Surveys can be used to detect the nests of special-status, as well as non-special status birds. An exclusion zone where no construction would be allowed shall be established around any active nests of any avian species protected by the MBTA and CDFW found in the Study Area until a qualified biologist has determined that all young have fledged. Suggested exclusion zone distances differ depending on species, location, and placement of nest, and shall be at the discretion of the biologist and, if necessary, the Service and CDFW. No pre-construction breeding bird surveys are necessary if construction starts during the non-breeding season (September 1 - January 31) and does not lapse for a period of 14 days or more with the breeding bird season.

Bat Species: No special-status bat species were identified based on general habitat characteristics and CNDDDB records from within 1 mile of the project site. Hoary bats (*Lasiurus cinereus*) are not typically found in urban parks, but individual bats could use the large trees at the project site as daytime roosts or for hibernation. Other bats that could potentially occur at the site include

Mexican free-tailed bats (*Talarida brasiliensis*), California myotis (*Myotis californicus*), Pallid bat (*Anthrozous pallidus*, a California Species of Special Concern), Western red bats (*lasiurus blossevillii*, a California Species of Special Concern), and big brown bat (*Eptesicus fuscus*).

If bats are roosting in buildings or trees within the project area or in the trees that are planned to be removed, potential disturbance or loss of roosting habitat could occur as a result of construction activity. Implementation of Mitigation Measure BIO-2 would reduce this impact to less-than significant by first identifying the presence or absence of roosting bats, and if present, preventing disturbance or loss of roosting habitat.

Mitigation Measure BIO-2: Roosting Bat Protection Measures. Before the spring breeding season and prior to construction, a qualified biologist shall conduct a survey for roosting bat habitat. The survey shall include work areas adjacent to appropriate roosting habitat that are accessible from public or project areas within 200 feet of a work area. For trees considered to have a high or moderate probability for bat roosting, acoustic monitoring shall be conducted before any construction activities begin during the breeding season to determine if there are any roosting sites present. Surveys shall be conducted at the appropriate times to maximize detectability. If an active roost or maternity roost is found within 100 feet of a work area, the limits of the work area will be clearly marked and a qualified biological monitor shall remain onsite during construction activities within the vicinity of the roost or maternity roost.

The biologist shall ensure that construction activities to do not encroach upon the 100 foot buffer around an active roost or maternity colony site. Buffers shall remain in place until the qualified biologist has determined that bats have vacated the occupied roost sites. If buffer reductions are requested and approved, a monthly report shall be submitted to CDFW with all of the information in the buffer reduction requests, monitoring results, and effects on bats. Reports shall be submitted for the duration of construction activities within buffer areas.

Trees containing maternity roosts shall not be removed during the breeding season (March 1 through August 31) to avoid disturbing females with young that cannot fly. No trees containing maternity roosts may be removed until the qualified biologist determines that breeding is complete and young are able to fly.

If fall/winter hibernacula cannot be avoided, humane techniques may be implemented to passively vacate bats from roosts. Methods to passively evict bats from tree roosts may include incrementally trimming limbs to alter the air flow and temperature around the roost feature where slight changes to the surrounding environment

of roost features encourage bats to vacate roost features on their own. If acoustic monitoring detects that bats are using trees that need to be cut down, these trees shall be removed only after it has been confirmed that roosting bats have departed.

With implementation of Mitigation Measures BIO-1 and BIO-2 identified above, impacts to special-status species would be less than significant.

- b. Would the project 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 Game or U.S. Fish and Wildlife Service? (No Impact)*

No riparian habitat or other sensitive natural communities are present on the project site. Therefore, the proposed project would have no effect on any riparian habitat or other sensitive natural community.

- c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (No Impact)*

The site does not contain federally protected wetlands as defined by Section 404 of the Clean Water Act. Ledgewood Creek, a riparian intermittent streambed with a seasonal flooding regime, is located 1,230 feet to the southwest and is separated from the project site by residential and commercial development. To the south of the project site, a freshwater emergent wetland habitat is separated from the project site by over 1,300 feet of residential and commercial development. Project activities do not include direct removal, filling, hydrological interruption, or other disruptions of natural hydrological regimes. Therefore, the proposed project would have no impact on federally protected wetlands.

- d. Would the project 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? (Less Than Significant with Mitigation Incorporated)*

The project site consists of an existing City park that is surrounded by residential and commercial development. No identified linkages or movement corridors are connected with the project site. Improvements planned as part of the project are not expected to interfere with the migration of wildlife species, such as birds and bats. However, there is a potential for bat maternity roosts to be present in the large, mature trees on the site. These roosts would be classified as nurseries, which require additional protection. Implementation of Mitigation Measure BIO-2 would reduce potential impacts to bat maternal roosts by requiring bat surveys prior to the removal of trees where bats may roost. With implementation of Mitigation Measure BIO-2, impacts related to native wildlife nursery sites would be less than significant.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Less Than Significant with Mitigation Incorporated)

Section 25.36, *Tree Conservation*, of the City's Municipal Code protects significant trees from unnecessary destruction or removal, encourages the replacement of trees lost to disease, natural hazards, or human intervention. "Protected trees" include:

- All trees on public property.
- Trees planted or preserved in private property or within the public right-of-way, which were required as a condition of approval or shown on a landscape drawing/plan for a project approved by the City.
- The following species of trees located on undeveloped private properties, which exceed 6 inches in caliper or diameter at breast height¹⁰: native oaks (*Quercus* sp.), bay laurel (*Umbellularia californica*), madrone (*Arbutus menziesii*), and buckeye (*Aesculus californica*).
- Trees or groups of trees having one or more of the following characteristics: 1) demonstrated habitat value; 2) historical or cultural value, as documented by published sources; 3) important aesthetic value; 4) uniqueness or rarity; or 5) unusual size or age.

The City's Tree Conservation ordinance prohibits removal, excessive pruning, topping, and disfigurement of any protected trees, or performance of any act, which results in the premature death or decline of a protected tree. In addition, the City's Tree Conservation Ordinance establishes mechanisms and policies for maintaining public trees in good health, and replacing public trees, where necessary so that the community may continue to enjoy the many benefits associated with trees.

The arborist report for the project site identifies 503 trees on the site, of which 72 are recommended for removal due to health and safety concerns. As part of the proposed project, some additional trees would be removed to accommodate planned amenities, road realignments, and parking lots. Trees removed as a result of the proposed project, which are not already recommended for removal, would be replaced at a ratio of 1:1. Trees identified for removal would be removed in phases consistent with project phasing, as well as the City's ongoing tree maintenance at the park and in compliance with the City's Tree Conservation Ordinance.

Retained trees could be affected by ground disturbance, soil compaction and other construction activities. Implementation of Mitigation Measure BIO-3 would protect individual trees within work zones by providing for effective root and crown protection of the respective tree from vehicular damage. With implementation of Mitigation Measure BIO-3, this impact would be less than significant.

¹⁰ Breast height is measured at a point located 4-1/2 feet above the existing ground level of the tree.

Mitigation Measure BIO-3:

Tree Protection Measures. All trees to be retained shall be protected during construction, and shall be clearly identified on construction plans and marked in the field for preservation with highly visible construction fencing at a minimum around the dripline of the tree. A Tree Protection Zone equivalent to one foot (1') of zone per one inch (1") of tree diameter at breast height shall surround each tree. No construction activities such as grading, vehicle parking, or storage of materials shall be conducted within the tree protection zones. The fencing shall be installed prior to any site clearing or grading activities, and shall remain in place until construction is complete. The fence shall be a minimum of 4' tall and supported by stakes at least every 10' on center. Weatherproof signs shall be permanently posted on the fences, stating, at minimum, the following: "Tree Protection Zone – Keep out". If trenching within the Tree Protection Zone is necessary, all trenches shall be hand dug. No roots larger than two inches (2") shall be cut unless no other alternative is feasible. Smaller roots shall be cut with pruning saws. Cuts shall be made flush with the side of the trench. If at any time twenty-five percent (25%) of the area within the Tree Protection Zone is being separated from the tree by a trench, then the line shall be either relocated or installed by boring. A three inch layer of chip mulch must be maintained within the Tree Protection Zone during construction to reduce soil compaction, improve aeration, enhance moisture retention and reduce temperature extremes.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (No Impact)

The Solano Habitat Conservation Plan (HCP) is expected to be adopted in 2019. The HCP provides take authorization for plan participants according to the impacts expected from development as described in each city's General Plan. The Fairfield General Plan identifies the project site as a Special Use Facility with a "single purpose in nature, having a unique or important recreational purpose". The proposed project would not have any impacts on special-status species or sensitive natural communities, therefore it would not require a permit through the HCP. Further, the nature and zoning of the project site would be generally consistent with that identified in the General Plan, therefore, no additional habitat mitigation would be required under the HCP. The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No mitigation is required.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

3.5.1 Impact Analysis

The project site is located in an urbanized environment within the City of Fairfield. The site is situated at an average elevation of 47 feet above mean sea level with a slight slope. A modern drainage canal is situated approximately 800 feet west of the site and perennial Laurel Creek is located approximately 3,700 feet east. Both of these waters are fed by the Suisun Slough, an element of Suisun Marsh.

Brief Site History. The oldest known archaeological component in this region of central California is from the Los Vaqueros Reservoir area in eastern Contra Costa County. Two sites at the reservoir (CA-CCO-637 and -696) have recently produced artifact assemblages and human burials dated between 9,870 and 6,600 years ago.¹¹

The most recent archaeological record in the region is marked by the appearance, for the first time, of small arrow-sized projectile points, beautifully trimmed show mortars, flanged pestles, flanged steatite pipes, and bird-bone tubes with chevron designs. Such deposits have been documented from most interior valleys and bay shore locations, as well as from upland contexts, where habitation and task-specific sites have been reported.

The project area is ethnographically attributed to the Patwin, who occupied the southern portion of the Sacramento Valley. Their territory ranged from the Sacramento River to the east and Clear Lake to the west, and from the town of Princeton in the north to the San Pablo and Suisun bays in the south.¹²

The main Patwin political group was the tribelet, which were politically independent land-holding groups, with a primary village and associated smaller satellite villages. Many villages were located

¹¹ Meyer, Jack and Jeffrey Rosenthal, 2007. *Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4*. Far Western Anthropological Research Group, Inc., Davis, California.

¹² Johnson, Patti J., 1978. *Patwin*. In California, edited by Robert F. Heizer, pp. 350–60. Handbook of North American Indians, Volume 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

near the mouth of the Napa River and drainages of Cache and Putah creeks.¹³ The APE is in the general territory of the Tolenas tribelet, with main villages Mesala and Yulyul near the shores of Suisun Bay.^{14, 15}

In 1769, the Spanish began establishing the Franciscan missions and military presidios as vehicles for taking complete control of Alta California. Alta California was the Spanish term used for upper California, as opposed to Baja California (lower California) in which the Dominican missions were situated. Beginning in San Diego, the Spanish priests quickly moved north. The first documented European expedition within the vicinity of the project site was the Pedro Fages expedition of 1772, which reached the Carquinez Strait and was followed four years later by the Anza expedition, which was searching for a land route to Point Reyes. The first crossing of the strait did not occur until 1810 when Gabriel Moraga led a raid against the Suisun tribe.¹⁶ This initial entry into the region culminated with the establishment of Mission San Francisco Solano, located in Sonoma, in 1823.¹⁷

The City of Fairfield is situated on land petitioned by José Francisco Armijo in 1839. The land was granted to Armijo by Governor Pio Pico in 1840 as Rancho Tolenas. The land passed to Armijo's son, Antonio, in 1850 upon his death, and was subsequently acquired by Captain R.H. Waterman in 1858. Waterman offered 16 acres to Solano County for a new, more centrally located county seat. Solano County voters accepted the offer, and the county seat was relocated from Benicia (Hoover et al., 2002).

LSA conducted a cultural resources study for the proposed project consisting of background research and a field survey. The results of the study are summarized below.

Background Research. LSA conducted background research for this study, including a records search at the Northwest Information Center (NWIC); a Sacred Lands File search at the Native American Heritage Commission (NAHC); and a literature and map/photograph review. The purpose of the background research was to identify recorded cultural resources and/or human remains in or adjacent to the project site, as well as to assess the potential that such resources and remains may exist based on the nature of prior land use. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resources records and reports for Solano County. The NAHC is a State agency that maintains the Sacred Lands File, an official list of sites that are of cultural and religious importance to California Native American tribes.

The NWIC records search identified no previously recorded cultural resources in the project site. One resource, P-48-000066 (CA-SOL-60), a midden site, is located approximately 0.25 miles to the

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Kroeber, Alfred L., 1925. Handbook of the Indians of California. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C. Reprinted 1976 by Dover Publications, New York.

¹⁶ Cohen, Andrew Neal, 1996. *Gateway to the Inland Coast: The Story of the Carquinez Strait*. California Lands Commission, The Carquinez Strait Preservation Trust, and the Carquinez Strait MOU Coordinating Council. Sacramento, California.

¹⁷ Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Rensch, and William N. Abeloe, 2002. *Historic Spots in California*. Fourth edition, revised by Douglas E. Kyle. Stanford University Press, Stanford, California.

southwest of the project site along the east bank of Ledgewood Creek. Seven cultural resources studies have been conducted within 0.5-mile of the project site. Of these, four intersect the project site.

Historic-period maps and aerial photographs indicate that the project site remained undeveloped until the mid-20th century. There is a low potential that historic-period archaeological deposits are located within the project site. Based on its environmental setting, the project site possesses low sensitivity for intact precontact archaeological deposits. Sensitivity is diminished by previous construction impacts associated with the existing amenities within Allan Witt Park. Therefore, it is unlikely that any intact precontact archaeological deposits are present within the project site.

The cultural resources study did not identify cultural resources that may meet the definition of a historical resource.

Field Survey. LSA archaeologist Rhea Sanchez, M.A., RPA 41587912, conducted a pedestrian survey of the project site on October 12, 2018. All exposed areas were carefully examined for native soils or potential precontact or historic-period cultural resources. Nearly all of the project site ground surface was obscured by fill soils forming landscaping mounds, bark and wood chips, baseball fields, a concrete skate park, an indoor basketball structure, the aquatics center and swimming pool, playgrounds, picnic areas, and asphalt parking areas. No cultural resources were identified as a result of the field survey.

Based on the alluvial origins of the soils types within the project site, and the marsh wetland character of the project site location, there is low potential for the presence of subsurface archaeological deposits in the project site that indicate long term settlement. However, this condition does not preclude the possibility of cultural resources that may suggest resource procurement or short-term camp.

Paleontological Resources. The Allan Witt Park site is underlain by Holocene alluvial deposits. This alluvium is comprised of medium-grained sands at the project site. These deposits are underlain at shallow depths (1 to 10 feet) by older Late Pleistocene alluvium that contains fossil resources. Pliocene and Late Pleistocene sediments in this region are known to contain significant vertebrate fossils. Vertebrate fossils from these geologic formations can include, but are not limited to, ground sloth, dire wolf, saber-toothed cat, camel, bison, mammoth, mastodon, horse, rodent, bird, reptile, and amphibian fossils.

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (Less Than Significant with Mitigation)

A historical resource defined by CEQA includes one or more of the following criteria: 1) the resource is listed, or found eligible for listing in, the California Register of Historical Resources (CRHR); 2) listed in a local register of historical resources as defined by Public Resources Code (PRC) Section 5020.1(k); 3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or 4) determined to be a historical resource by the project's lead agency (PRC Section 21084.1; CEQA Guidelines Section 15064.(a)). Under CEQA, historical resources include built-environment resources and archaeological sites.

The cultural resources study prepared for the proposed project did not identify archaeological cultural resources in or adjacent to the project site. Despite the negative results of the study, the potential for encountering intact archaeological deposits and/or human remains during project construction cannot be ruled out. Any impacts to such resources would be significant under CEQA. Implementation of the following mitigation measures would reduce potential impacts to cultural resources or their accidental discovery during project construction to less than significant.

Mitigation Measure CULT-1: Unanticipated Discovery of Archaeological Resources. If deposits of precontact or historic-period archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological materials can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, bones, and other cultural materials); and stone-milling equipment (e.g., mortars, pestles, and handstones). Precontact archaeological sites often contain human remains. Historic-period materials can include wood, stone, concrete, or adobe footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.

If such deposits cannot be avoided, they shall be evaluated in consultation with the City and a qualified archaeologist. If the discovery is precontact in nature, tribal stakeholders shall be consulted as part of this process. If the deposit is eligible for the CRHR, adverse effects to the deposit shall be avoided or such effects shall be treated. If treatment is required, a plan shall be developed in consultation with the City, and the State Historic Preservation Officer (SHPO) to mitigate, avoid, or minimize adverse effects to historic properties. Treatments may consist of, but are not necessarily limited to, systematic recovery and analysis of archaeological deposits; recording the resource; preparation of a report of findings; accessioning recovered archaeological materials at an appropriate curation facility; and community outreach. All reports produced as part of the evaluation and treatment of cultural resources identified during the project shall be submitted to the City and SHPO for review and comment. All final documents shall be submitted to the NWIC.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Less Than Significant with Mitigation)

According to the CEQA Guidelines, “When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource” (CEQA Guidelines Section 15064.5 (c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as “unique archaeological resources” (California PRC Section 21083.2).

As described in Response 3.5(a), background research was done to identify archaeological deposits—and the potential for encountering such deposits—including those that qualify as archaeological resources under CEQA. This background research determined that there are no recorded archaeological resources on the project site and it is unlikely that any intact precontact archaeological deposits are present within the project site. However, unknown archaeological resources or artifacts associated with previously identified resources could be discovered during construction. Mitigation Measure CULT-1 requires that the project contractor halt work and consult a qualified archaeologist if unknown archaeological resources are discovered during construction. Therefore, adherence to the requirements in Mitigation Measure CULT-1 would reduce potential impacts to archaeological resources to less than significant. No additional mitigation is required.

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less Than Significant with Mitigation)

Geologic units known to contain paleontological resources (fossils) underlie the soil layers of the project site. LSA recommends that an average soil depth of 6 feet (72 inches) be assumed for soil depth at these sites. Ground disturbing construction activities below this depth may inadvertently encounter and damage paleontological resources. Should this occur, project construction may result in the destruction of a unique paleontological site, resulting in a potentially significant impact. Mitigation Measure CULT-2 would reduce this impact to less than significant.

Mitigation Measure CULT-2: Paleontological Resources Protection. If ground disturbing activity is anticipated to occur below 6 feet of the surface soil layer at the project site, the initial ground disturbance below that depth shall be monitored by a qualified paleontologist. The duration and timing of the monitoring shall be determined by the project paleontologist and based upon the location and extent of proposed ground disturbance. If the project paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, the project paleontologist may recommend that monitoring be reduced to periodic spot-checking or cease entirely. Monitoring is not necessary in artificial fill or for activities that do not reach below 6 feet in depth.

Pre-field monitoring preparation by a qualified paleontologist shall take into account specific details of project construction plans as well as information from available paleontological, geological, and geotechnical studies. Limited subsurface investigations may be

appropriate for defining areas of paleontological sensitivity prior to ground disturbance.

If paleontological resources are encountered during construction activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor can evaluate the resources and make recommendations. If paleontological deposits are identified, it is recommended that such deposits be avoided by construction activities. Paleontological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible paleontological material and to protect the resource while it is being evaluated. If avoidance is not feasible, adverse effects to such resources should be mitigated. Mitigation can include data recovery and analysis, preparation of a report and the presentation of fossil material recovered to an accredited paleontological repository, such as the University of California Museum of Paleontology (UCMP).

Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are no longer likely to be encountered. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. Copies of this report should be submitted to the City of Fairfield Planning Department and to the repository to which any fossils were presented.

If paleontological resources are encountered when the paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for scientific significance. If determined to be significant, the fossil shall be collected from the field. The paleontologist may also make recommendations regarding additional mitigation measures, such as paleontological monitoring. Scientifically significant resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. If scientifically significant paleontological resources are collected, a report of findings shall be prepared to document the collection.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries? (Less Than Significant with Mitigation)

Despite the negative results of the cultural resources study, the potential for encountering intact archaeological deposits and/or human remains during project construction cannot be ruled out. Implementation of the following mitigation measure would reduce potential impacts to human remains or their accidental discovery during project construction to less than significant.

Mitigation Measure CULT-3: Unanticipated Discovery of Human Remains. If human remains are encountered during project activities, work within 25 feet of the discovery shall be redirected and the Solano County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Work within 25 feet of the discovery can resume only after the MLD has inspected the site, provided recommendations, and the remains and associated grave goods removed from the site by a qualified archaeologist in consultation with the MLD. The archaeologist shall prepare a report that provides recommendations for the treatment of the human remains and any associated cultural materials, as well as proposed or implemented methods and results from excavation and analysis. Treatment of the remains and associated cultural materials shall be done in coordination with the recommendations of the MLD and City. The report shall be submitted to the City and SHPO for review and comment. The final report should be submitted to the NWIC.

3.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e. 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?	☐	☐	☐	☒

3.6.1 Impact Analysis

The project site is located at the eastern edge of the Coast Ranges Geomorphic Province near the boundary with the Great Valley Geomorphic Province of California, a relatively young and seismically-active region on the western margin of the North American plate. The regional structure of the Coast Ranges consist of northwest trending folds and faults created by the tectonic setting of colliding plate boundaries and subsequent transitional shear along the San Andreas Fault Zone (SAFZ). As a result, northwest-southeast trending ranges of low mountains and intervening valleys dominate this region.¹⁸ In general, the Coast Ranges are composed of sedimentary bedrock. Nearer the surface, layers of recent alluvium fill the intervening valleys. The project site is underlain by deep Quaternary alluvium.^{19 20}

¹⁸ California Geographic Survey, 2002. *California Geomorphic Provinces, Note 36*.

¹⁹ California Division of Mines and Geology, 1947. Quaternary Geologic Map of the San Francisco 4° x 6° Quadrangle.

²⁰ United States Geological Survey, 1979. Geologic Map of Flatlands Deposits of the Northeastern Part of San Francisco Bay Region, USGS Professional Paper #943.

a. *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (No Impact)*

Surface fault rupture occurs when the ground surface is broken due to fault movement during an earthquake. Fault rupture is generally expected to occur along active fault traces. Areas susceptible to fault rupture are delineated by the California Geological Survey (CGS) Alquist-Priolo Earthquake Fault Zones and require specific geological investigations prior to certain kinds of development to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-induced ground failure. The project site is not located within an Alquist-Priolo Earthquake Zone and does not have any active faults mapped within it.²¹ Therefore, the proposed project would have a Less Than Significant impact on people and structures related to fault rupture.

ii. *Strong seismic ground shaking?*

Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity (MMI) scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.²² The closest faults to the project site are the Cordelia Fault, located approximately 4.1 miles from the project site, the Great Valley 05 Pittsburg Kirby Hills Fault, located approximately 5.2 miles from the project site, and the Green Valley 2011 CFM, located approximately 5.7 miles from the project site.²³ A list of active faults in the region and their proximity to the project site is provided in Table 5.

ABAG mapped the likely shaking intensities in the Bay Area that would have a 10 percent chance of occurring in any 50-year period. A large earthquake (magnitude 6.7 or greater) on one of the

²¹ California Geological Survey, 2018. California Earthquake Hazards Zone Application. Website: <https://www.conservation.ca.gov/cgs/geohazards/eq-zapp> (accessed March 29, 2019).

²² United States Geological Survey, 2018. The Modified Mercalli Intensity Scale. Available: <http://earthquake.usgs.gov/learn/topics/mercalli.php> (accessed March 29, 2019).

²³ Geocon Consultants, Inc., 2018. *Geotechnical Investigation, Allan Witt Park Renovation, Fairfield, California*. November.

major active faults in the region would generate very strong (MMI VIII) ground shaking at the project site.²⁴

Table 5: Regional Active Faults

Fault Name	Approximate Distance from Site (miles)	Maximum Moment Magnitude, Mw
Cordelia Fault	4.1	6.5
Great Valley 5 Pittsburg Kirby Hills	5.2	6.6
Green Valley 2011 CFM	5.7	6.8
Vaca Fault Zone	6.6	6.4
Great Valley 04b Gordon Valley	6.7	6.7
Los Medanos – Roe Island	11.2	6.8
Contra Costa Shear Zone (connector) 2011 CFM	11.8	6.5
West Napa Fault Zone (Napa County Airport)	11.9	6.6
West Napa Fault Zone (Browns Valley Section)	12.7	6.6
Concord 2011 CFM	13.2	6.9
Clayton	19.5	6.9
Great Valley 04a Trout Creek	19.9	6.5
Rodgers Creek	21.6	7.3
Great Valley 06 (Midland)	22.8	6.8
Hayward (North)	23.3	7.3
Mount Diablo Thrust	25.6	6.6
Great Valley 03a Dunnigan Hills	27.8	6.4
Calaveras (No) 2011 CFM	27.8	6.9

Source: Geocon Consultants, Inc. (2018b).

The most significant adverse impact associated with strong seismic shaking is potential damage to structures and improvements. No habitable structures would be constructed as part of the proposed project; however, implementation of planned improvements could increase the use of the project site. The risk of ground shaking impacts is reduced through adherence to the design and materials standards set forth in building codes. The City of Fairfield has adopted the 2016 California Building Code (Title 24, Part 2 of the California Code of Regulations), which provides for stringent construction requirements on projects in areas of high seismic risk. The design and construction for the proposed project would be required to conform with, or exceed, current best standards for earthquake resistant construction in accordance with the most recent California Building Code adopted by the City, and with the generally accepted standards of geotechnical practice for seismic design in Northern California.

Adherence to the 2016 CBC requires a site-specific geotechnical investigation to be performed for the proposed project to evaluate soil stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness; and that a geotechnical report be prepared to provide recommendations on foundation type and design criteria. Consistent with Section 25.243 of the

²⁴ Association of Bay Area Governments, 2018a. Shaking Scenarios Map, Available: <http://gis.abag.ca.gov/website/Hazards/?hlyr=haywardSouthNorth&co=6013> (accessed March 29, 2019).

City of Fairfield Municipal Code, the City will incorporate the recommendations contained in the Geotechnical Investigation into the proposed project. Prior to the issuance of any site-specific grading or building permits, the City's Building Department shall confirm that project plans have incorporated the recommendations of the geotechnical report to minimize seismic damage to the planned structures and minimize potential impacts related to the presence of expansive soils. Therefore, impacts related to strong seismic ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction? (Less Than Significant Impact)

Liquefaction is the transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment.

Regional mapping identifies the project site to be in an area underlain by materials of moderate or high susceptibility to liquefaction, and the area was mapped as a moderate risk for liquefaction.²⁵ However, information presented in a site-specific investigation indicates that based on the predominant presence of fine-grained soils (clay and silt) at the site, the potential for liquefaction is low.²⁶

Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon reaching mobilization, the surface soils are transported downslope or in the direction of a free face by earthquake and gravitational forces. The project site is relatively flat and development of the proposed project would not exacerbate lateral spreading. Therefore, the proposed project would have a less than significant impact related to seismic-related ground failure, including liquefaction and lateral spreading.

iv. Landslides? (No Impact)

A landslide generally occurs on relatively steep slopes and/or on slopes underlain by weak materials. No habitable structures would be constructed as part of the proposed project nor would construction of the proposed project increase the potential for landslide hazards as no slopes are present in proximity to the project site. Therefore, the proposed project would not expose people or structures to potential substantial adverse effects from landslides.

b. Would the project result in substantial soil erosion or the loss of topsoil? (Less Than Significant Impact)

The potential for soil erosion exists during the period of earthwork activities and between the time when earthwork is completed and new vegetation is established or hardscape is installed. Exposed soils could be entrained in stormwater runoff and transported off the project site. However, this impact would be reduced to a less than significant level through compliance with water quality control measures, which include preparation of a Stormwater Pollution Prevention Plan (SWPPP)

²⁵ Association of Bay Area Governments, 2018. Liquefaction Susceptibility Map. Website: <http://gis.abag.ca.gov/website/Hazards/?hlyr=liqSusceptibility> (accessed December 19, 2018).

²⁶ Geocon Consultants, Inc., 2018, op. cit.

(refer to Section 3.9, Hydrology and Water Quality). Although designed primarily to protect stormwater quality, the SWPPP would incorporate Best Management Practices (BMPs) to minimize erosion. Additional details regarding the SWPPP are provided in Section 3.9, Hydrology and Water Quality, of this Initial Study.

- c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (Less Than Significant Impact)*

As described in Section 3.6.1.a, soils on the project site would not be subject to liquefaction, lateral spreading, or landslides. Additionally, the proposed project would be required to conform with the California Building Code, which would reduce risks related to unstable soils. Therefore, the proposed project would have a less than significant impact related to unstable soils.

- d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (Less Than Significant Impact)*

Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume.²⁷ Soils underlying the project site have a moderate to high shrink/swell potential.²⁸ As noted in Section 3.6.1.a, adherence to the 2016 CBC requires that a site-specific geotechnical investigation be performed for the proposed project to evaluate soil stability, soil strength, position and adequacy of load-bearing soils, effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness; and that a geotechnical report be prepared to provide recommendations on foundation type and design criteria. The Geotechnical Investigation prepared for the proposed project includes mitigation and specific design measures with respect to expansive soil, including placement of a layer of low-expansive material below structural slabs to reduce the potential for slab distress, and low-expansive fill underlaying concrete flatwork and other exterior slabs. Consistent with Section 25.243 of the City of Fairfield Municipal Code, the City will incorporate the recommendations contained in the Geotechnical Investigation into the proposed project. Therefore, potential impacts related to expansive soils would be less than significant.

- e. Would the project 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? (No Impact)*

The proposed project would connect to the City's wastewater conveyance system. On-site treatment and disposal of wastewater is not proposed for the project; therefore, the proposed project would have no impacts associated with soils incapable of supporting alternative wastewater disposal systems.

²⁷ Natural Resources Conservation Service, 2017. *Web Soil Survey*. Website: websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed March 29, 2019).

²⁸ Geocon Consultants, Inc., 2018, op. cit.

3.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.7.1 Impact Analysis

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF₆).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO₂, methane, and N₂O, some gases, like HFCs, PFCs, and SF₆ are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above, because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular

GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less Than Significant Impact)

This section describes the proposed project’s construction- and operational-related GHG emissions and contribution to global climate change. The BAAQMD has not addressed emission thresholds for construction in their CEQA Guidelines; however, the BAAQMD encourages quantification and disclosure. Thus, construction emissions are discussed in this section.

Construction Activities. Construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that construction of the proposed project would generate approximately 326.8 metric tons of CO₂e. When considered over the 5-year construction period, construction emissions would be approximately 65.4 metric tons of CO₂e per year. In addition, when considered over the 30-year life of the project, the amortized construction emissions would be approximately 10.9 metric tons of CO₂e per year. Implementation of Mitigation Measure AIR-1 would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, project construction impacts associated with GHG emissions would be considered less than significant.

Operational Emissions. Long-term operation of the proposed project would generate GHG emissions from area and mobile sources as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources.

Following guidance from the BAAQMD, GHG emissions were estimated using CalEEMod. Table 6 shows the calculated GHG emissions for the proposed project. Motor vehicle emissions are the largest source of GHG emissions for the project at approximately 91 percent of the total. Water and energy sources are about 5 percent and 3 percent of the total emissions respectively. Waste source emissions are approximately 1 percent of the total. Additional calculation details are included in Appendix A.

Table 6: GHG Emissions (Metric Tons Per Year)

Emissions Source	Operational Emissions				
	CO ₂	CH ₄	N ₂ O	CO ₂ e	Percent of Total
Area Source Emissions	0.0	0.0	0.0	0.0	0
Energy Source Emissions	12.8	0.0	0.0	12.9	3
Mobile Source Emissions	430.8	0.0	0.0	431.2	91
Waste Source Emissions	0.8	0.0	0.0	1.9	1
Water Source Emissions	26.7	0.0	0.0	26.9	5
Total Annual Emissions				472.9	100
BAAQMD Threshold				1,100	-
Exceed?				No	-

Source: LSA (January 2019).

According to the BAAQMD, a project would result in a less-than-significant GHG impact if it would:

- Result in operational-related greenhouse gas emissions of less than 1,100 metric tons of CO₂e a year; or
- Result in operational-related greenhouse gas emissions of less than 4.6 metric tons of CO₂e per service population (residents plus employees).

Based on the results of the construction and operation analysis, the project would not generate GHG emissions that would have a significant effect on the environment. The proposed project would generate 472.9 metric tons of CO₂e, which would be well below the BAAQMD's numeric threshold of 1,100 metric tons CO₂e. Operation of the proposed project would not generate significant GHG emissions that would have a significant effect on the environment and would have a less-than-significant impact related to operational GHG emissions.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less Than Significant Impact)

The City of Fairfield does not have a climate action plan; however, the City Council adopted Resolution No. 2009-229, approving the City's Sustainability Report in 2009.²⁹ As part of that resolution, the City Council encouraged City staff to pursue sustainability initiatives that generate energy, cost savings, and reductions in GHG emissions and authorized the formation of a Green Team to facilitate implementation. Through this effort, the City seeks to be a leader in the area of municipal sustainability.

The Sustainability Report includes a Sustainable Development chapter, which provides a list of various policies and regulations already in place that promote sustainable development. The following policies and regulations are applicable to the proposed project.

²⁹ Fairfield, CA. *Sustainability Initiative 2009*.

- Future development will largely occur within the existing City limits. Limited development will be proposed outside the city limits, primarily to achieve certain related objectives that are difficult to achieve within the existing city limits.
- The City will provide incentives for concentrated development of infill areas within the existing City boundaries. These incentives will include modifications to development regulations and city fees.
- There will be a greater emphasis than in the past on pedestrian-oriented development (POD) and transit-oriented development (TOD).

The proposed project would be consistent with these policies and regulations as the project site is located in a developed area and is surrounded by residential, commercial, school and religious uses. The proposed project would include the renovation of the existing Allan Witt Community Park and upgrade existing park recreation facilities, as well as add new recreation opportunities. In addition, the proposed project would not result in a substantial increase in GHG emissions, is consistent with the sustainability initiatives, and would not generate emissions that would exceed the project-level significance criteria established by the BAAQMD. Therefore, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

3.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

3.8.1 Impact Analysis

The information contained in this section of the Initial Study is based on the findings of the Phase I Environmental Site Assessment (ESA) and Limited Phase II Investigation prepared by ENVIRON for the project site in May 2006.³⁰

From 1889 to 1902, five small buildings were located in the northwest corner of the project site; the remainder of the site was undeveloped. In a 1937 aerial photograph, the project site was observed to be used for agricultural purposes (including orchards in the late 1940s), with farm structures on the eastern portion of the site. In 1944, the City of Fairfield purchased the Allan Witt property from Solano Investment Company. In 1957, the swim center at the park was constructed. Restrooms were

³⁰ ENVIRON International Corporation, 2006. *Phase I Environmental Site Assessment and Limited Phase II Investigation of Allan Witt Park and Adjacent Properties, Assessor's Parcel Number 031-170-020, 031-301-030, and 031-282-01, Fairfield, California, prepared for Centex Homes, San Ramon, California.* May.

constructed in 1964 and 1967; the sports complex in 1977; concessions buildings in 1971 and 1986; and the playgrounds were rebuilt in 2004.

In 1949, the City sold the northwestern portion of the Allan Witt property to Caltrans for a maintenance facility. Construction of Caltrans facilities began in the early 1950s.³¹ Five former underground storage tanks (USTs) were located on this portion of the property: one 2,000-gallon fiberglass diesel UST (removed 1998); one 12,000-gallon fiberglass gasoline UST (removed 1998); one 550-gallon carbon steel waste oil UST (removed 1988); one carbon steel gasoline tank (capacity and date of removal unknown); and one carbon steel diesel UST (capacity and date of removal unknown). The five USTs have achieved closure status from Solano County Department of Resource Management (SCDRM).

The former water treatment plant, which was located on the vacant parcel southeast of and adjacent to the park, previously included a main building, clarifier tank, pump house, two concrete reservoirs, two sludge basins, and a small maintenance shed. Chemicals associated with water treatment, such as alum, chlorine gas, activated carbon, and lime, were historically located on this site, including a diesel generator with a 100-gallon tank. Operations at the former water treatment plant ceased in 1976; however, the reservoirs were used until approximately 1980. The majority of the structures at the former water treatment plant were demolished and removed in about 2002.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less Than Significant Impact)

The proposed project would improve an existing park. After project construction, small quantities of commercially available hazardous materials (e.g., paint, cleaning supplies) would be used at the project site and at the new sports facility during operation. However, the City would be required to comply with existing government regulations³² in its use and disposal of these materials, and such materials would not be used in sufficient strength or quantity to create a substantial risk to human or environmental health. Therefore, the proposed project would have a less than significant impact related to the routine transport, use, or disposal of hazardous materials.

b. Would the project 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? (Less Than Significant With Mitigation)

Hazardous materials most likely to be used during construction include typical construction materials such as gasoline, diesel, motor oil, lubricants, solvents, and adhesives. Such materials would be kept at construction staging areas, and would be secured when not in use. In the unlikely event of a spill, fuels would be controlled and disposed of in accordance with applicable regulations. Drips and small spills would be the most likely potential hazardous materials releases to occur,

³¹ The Caltrans portion of the site may have been used as a vehicle maintenance station since as early as 1942.

³² The United States Environmental Protection Agency regulates “small-quantity generators” (SQGs) of hazardous wastes, which are defined as facilities that generate more than 100 kg (approximately 220 lbs), but less than 1,000 kg (2,200 lbs), of hazardous waste per month.

however, any release that occurs in close proximity to a stream or drainage channel could have a significant impact on the environment, if not properly controlled. The proposed project would be required to prepare and implement a SWPPP in accordance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (NPDES General Construction Permit)(Order No. 2009-0009-DWQ, NPDES No. CAS000002) (SWRCB, 2009) permitting requirements, which would reduce the potential for hazardous materials releases to occur during construction, and would reduce the potential for spills to impact sensitive habitat or human health, to less than significant. SWPPPs are required for construction sites over one acre that do not qualify for a waiver.

A soil gas survey completed in 2005 at locations within Allan Witt Park, the existing Caltrans Maintenance Facility, and the site of the former Water Treatment Plant, identified three locations within the Caltrans Maintenance Facility that exceeded residential screening levels for benzene. The survey also detected total petroleum hydrocarbon as gasoline (TPH-g) in one sample at the Caltrans Maintenance Facility above screening levels for residential land uses. It was reported that releases of gasoline from upgradient off-site facilities could be the source of the soil gas contamination. Dieldrin, a pesticide, was also reported in soil samples collected within Allan Witt Park above laboratory reporting limits. The calculated 95 percent Upper Confidence Limit (UCL) of the mean concentration of dieldrin at and near this location was below the residential screening level.

Arsenic and cadmium were also reported in shallow samples collected within Allan Witt Park component, but the parkwide 95 percent UCL was reported to fall within the estimated regional background concentrations for arsenic and cadmium. The same is true for metals reported in shallow soil samples collected at the former water treatment plant site.

Construction workers would have direct contact with surface and deeper soils and possibly shallow groundwater potentially containing hazardous materials (even though groundwater is not planned for extraction for drinking or irrigation supplies as part of the proposed project). Future site occupants (park users, landscape maintenance workers) could also come into contact with hazardous materials in soil, soil gas, and/or groundwater. Potential contact with hazardous materials could result in adverse health effects to construction workers and future site occupants, depending on the concentration and type of hazardous materials, and duration of exposure.

Implementation of the following mitigation measures would reduce this impact to a Less Than Significant level.

Mitigation Measure HAZ-1: Prior to issuance of a grading permit, a risk assessment shall be conducted by a qualified environmental professional for the Allan Witt Park component to estimate the risks and hazards to construction workers and future site occupants (recreational, landscape maintenance, and utility workers). The risk assessment shall be completed under the oversight of the City and a regulatory agency (e.g., Solano County Environmental Health Services [SCEHS]). The City shall ensure that individual excess lifetime cancer risks for construction workers and future site occupants do not exceed a one-in-one million (1×10^{-6}), or a cumulative hazard index of 1.0, or

as otherwise required by the regulatory oversight agency. Should the calculated individual excess lifetime cancer risks and/or cumulative hazard index exceed these thresholds, the project contractor shall prepare and implement a Site Remediation Plan under the direction of the City and regulatory oversight agency to achieve these thresholds or implement engineering or institutional controls to eliminate exposure.

Mitigation Measure HAZ-2: Prior to the issuance of any grading, demolition, or building permits for the project, a Construction Risk Management Plan (CRMP) shall be prepared for the project by a qualified environmental professional. At a minimum, the CRMP shall include health and safety provisions for construction workers; dust control suppression procedures and air monitoring; site control measures; emergency procedures; and responsible personnel. The CRMP shall also include procedures for managing soils and dewatered groundwater (as applicable) removed from the site to ensure that any potentially contaminated materials are stored, managed, and disposed of in accordance with applicable statutes and regulations. The CRMP shall be submitted to SCEHS for review and approval.

Mitigation Measure HAZ-3: The contractor(s) or project sponsor shall prepare a Waste Disposal and Hazardous Materials Transportation Plan prior to activities where hazardous wastes or materials that require off-site disposal are required as part of site preparation activities. The Plan shall include a description of the handling methods required to minimize the potential for exposure and establish procedures for the safe storage of contaminated materials (as appropriate) prior to off-site transport. The required disposal method for contaminated materials and the approved disposal facility shall also be indicated in the plan.

The plan shall also identify specific routes to be used for transport of hazardous materials and waste to and from the project site, or specific routes to be avoided during transport. Routes shall be selected to minimize proximity to sensitive receptors to the greatest practical degree. The plan shall be submitted to the City prior to earthwork activities, and documentation of all wastes removed shall be submitted to the City following site preparation activities.

*c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (**Less Than Significant with Mitigation**)*

One school, Ruth Sheldon Elementary School (1901 Woolner Avenue), is located within ¼ mile of the proposed project. The proposed project would not include any land uses that would generate

hazardous emissions or handle significant quantities of hazardous or acutely hazardous materials beyond existing conditions.

As described in Sections 3.8.1.a and 3.8.1.b, the City would be required to comply with all applicable local, State, and federal regulations and standards related to hazardous emissions and materials. Construction activities associated with project construction could release hazardous materials in soil, soil gas, and/or groundwater on the project site. Implementation of Mitigation Measures HAZ-1 through HAZ-3 would reduce potential impacts associated with hazardous materials to less than significant.

d. Would the project 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? (Less Than Significant With Mitigation)

The project site is not included on lists of hazardous materials release sites compiled pursuant to Government Code Section 65962.5.³³ As discussed above, the disturbance of soil impacted with hazardous materials could result in a release of hazardous materials into the environment. Implementation of Mitigation Measures HAZ-1 through HAZ-3 would reduce potential impacts associated with the release of hazardous materials to less than significant. Therefore, with implementation of Mitigation Measures HAZ-1 through HAZ-3, the proposed project would not create a significant hazard to the public or the environment, as a result of being located on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5.

e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (Less Than Significant Impact)

Travis Air Force Base is the closest airport to the project site, and is located approximately 5 miles to the east. The project site is located within Zone D as specified in the Travis Air Force Base Land Use Compatibility Plan.³⁴ Compatibility Zone D includes all other locations beneath any of the Travis Air Force Base airspace protection surfaces delineated in accordance with Federal Aviation Regulations (FAR) Part 77 as well as areas subject to frequent aircraft overflight. Limitations on the height of structures and notice of aircraft overflights are the only compatibility factors within Zone D. Therefore, because the proposed project does not include development that exceeds 200 feet in height, there would not be a safety hazard for people residing or working in the project area and this impact would be less than significant.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

The project site is not located within the vicinity of a private airstrip. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project due to the proximity of a private airstrip.

³³ ENVIRON International Corporation, 2006, op. cit.

³⁴ ESA, 2015. *Travis Air Force Base Land Use Compatibility Plan*. October 8.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Less Than Significant Impact)

The City of Fairfield Fire Department (Fire Department) coordinates the City's preparedness efforts to mitigate, plan for, respond to and recover from disasters. In addition, the Solano County Office of Emergency Services coordinates countywide emergency response efforts including the preparation and implementation of the Solano County Emergency Operations Plan (EOP)³⁵ and the Solano County Local Multi-Hazard Mitigation Plan.³⁶ However, the EOP does not address specific responses, scenarios, hazards, or threats, within Fairfield. In addition, the EOP does not indicate the emergency evacuation routes within Solano County. Because the proposed project would not substantially alter or block the adjacent roadways, the proposed project would not be expected to impair the function of nearby emergency evacuation routes. Therefore, the proposed project would have a less than significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

h. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (No Impact)

The project site is in an urban area and is not within or adjacent to a wildland fire hazard area.³⁷ Therefore, the proposed project would not expose people or structures to a significant loss, injury or death involving wildland fires.

³⁵ Solano County Office of Emergency Services, 2017. *Emergency Operation Plan, Solano County, California*. January.

³⁶ Michael Baker International, 2012. *Solano County Multi-Hazard Mitigation Plan*. March.

³⁷ Cal Fire, 2007. *Draft Solano County Very High Fire Hazard Severity Zones in LRA*. October 3.

3.9 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e. 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?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.9.1 Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements? (Less Than Significant Impact)

The State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards regulate water quality of surface water and groundwater bodies throughout California. In the Bay Area, including the project site, the Water Board is responsible for implementation of the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies in the region.

Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is

mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Water Board.

Construction Activities. Any construction activities, including grading, that would result in the disturbance of 1 acre or more would require compliance with the State Water Resources Control Board's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002) (Construction General Permit). The project site is approximately 48 acres and would be required to comply with the Construction General Permit. On-site construction activities subject to the Construction General Permit include clearing, grading, excavation, and soil stockpiling. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. A SWPPP identifies all potential pollutants and their sources, including erosion, sediments, and construction materials and must include a list of Best Management Practices (BMPs) to reduce the discharge of construction-related stormwater pollutants. A SWPPP must include a detailed description of controls to reduce pollutants and an outline of maintenance and inspection procedures. Typical sediment and erosion BMPs include protecting storm drain inlets, establishing and maintaining construction exits and perimeter controls to avoid tracking sediment off-site onto adjacent roadways. A SWPPP also defines proper building material staging and storage areas, paint and concrete washout areas, describes proper equipment/vehicle fueling and maintenance practices, measures to control equipment/vehicle washing and allowable non-stormwater discharges, and includes a spill prevention and response plan.

In addition, per the City Municipal Code, an erosion, sediment and runoff control plan would be required to be prepared as part of the process for obtaining a Grading Permit. The plan would indicate necessary land treatment, structural measures, and timing requirements to minimize soil erosion, sedimentation and the rate of water runoff during grading operations. Therefore, adherence to the requirements of the Construction General Permit and City requirements would ensure that construction of the project would result in a less than significant impact associated with the violation of water quality standards or waste discharge requirements, and no mitigation is required.

Operation Activities. Although the site is currently developed with the Allan Witt Community Park, the proposed project would reduce the overall lawn area, thereby increasing the amount of impervious surface area. The increase in impervious surface area could result in increased stormwater runoff (both flow rate and volume) from the project site relative to pre-project conditions, which may result in hydromodification impacts (i.e., increased potential for erosion of creek beds and banks, silt pollution generation, or other adverse impacts on beneficial uses due to increased erosive force).

The proposed project would be subject to the Regional Water Board Municipal Regional Permit (MRP) implemented in November 2015 by Order R2-2015-0049. Provision C.3 of the MRP requires new development and redevelopment projects that would replace more than 10,000 square feet of existing impervious surfaces to include post-construction stormwater control in project designs. Under the C.3 requirements, the preparation and submittal of a Stormwater Control Plan (SCP) would be required for the project site. The purpose of a SCP is to detail the design elements and

implementation measures necessary to meet the post-construction stormwater control requirements of the MRP. In particular, SCPs must include Low Impact Development (LID) design measures, which reduce water quality impacts by preserving and recreating natural landscape features, minimizing imperviousness, and using stormwater as a resource, rather than a waste product. The proposed project would also be required to prepare a Stormwater Facility Operation and Maintenance Plan to ensure that stormwater control measures are inspected, maintained, and funded for the life of the project.

As outlined in the project description, the proposed project would include approximately 25 bioretention swales, with a total area of approximately 12,000 square feet, to treat runoff from impervious surface areas including the driveways and parking lots. Pipes and drains would be constructed under the swales to discharge treated water from the bioretention swales into the new storm drain pipes constructed as part of the proposed project.

Compliance with the C.3 requirements of the MRP would ensure that operation-period impacts to water quality would be less than significant.

b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? (Less Than Significant Impact)

Although the proposed project would result in a net increase in impervious surface coverage compared to the existing condition, the proposed project would include the use of LID features that would retain and clean stormwater onsite before discharging it into the municipal stormwater system consistent with Provision C.3 of the MRP.

The proposed project would include connections to the existing water lines within the vicinity of the project site and would not require the use of groundwater. Due to the depth of groundwater and the shallow excavations required for project construction, dewatering is not anticipated during construction activities. The potential for the proposed project to substantially deplete groundwater supplies is less than significant.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? (Less Than Significant Impact)

The proposed project would not result in the alteration of the course of a stream or river. The project site is located in an urban area surrounded by development and would not substantially alter the existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. Furthermore, compliance with construction- and operation-period stormwater requirements would further ensure that development of the proposed project would not result in substantial erosion or siltation on- or off-site. Therefore, the proposed project would have a less than significant impact related to existing drainage patterns.

- d. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site? (Less Than Significant Impact)*

Refer to Section 3.9.1.c. The proposed project would not substantially alter the existing drainage or flooding pattern of the project site.

- e. *Would the project 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? (Less Than Significant Impact)*

Refer to Section 3.9.1.a and 3.9.1.c. The proposed project would not create or contribute runoff that would exceed the existing or planned stormwater drainage systems. As outlined in the project description, the proposed project would include approximately 25 bioretention swales, with a total area of approximately 12,000 square feet, to treat runoff from impervious surface areas, including the driveways and parking lots. Pipes and drains would be constructed under the swales to discharge treated water from the bioretention swales into the new storm drain pipes constructed as part of the proposed project. Compliance with State and City requirements for preparation of a SWPPP and a SCP would ensure that potential impacts associated with runoff and stormwater drainage systems would be less than significant.

- f. *Would the project otherwise substantially degrade water quality? (Less Than Significant Impact)*

Operation of the proposed project would not result in any substantial changes to on-site water quality, with the exception of the potential impacts associated with stormwater runoff described in Section 3.9.1.a. The proposed project would not adversely affect water quality, and would have a less than significant impact.

- g. *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (No Impact)*

The southeastern portion of the project site is located within the 100-year flood hazard zone, as mapped by the Federal Emergency Management Agency (FEMA).³⁸ However, the proposed project would not include any residential uses. Therefore, this impact would be less than significant.

- h. *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows? (Less Than Significant Impact)*

As noted in Section 3.9.1.g, the southeastern portion of the project site is located within the 100-year flood hazard zone, as mapped by FEMA. As shown in the concept plan (Figure 3), proposed improvements in the flood area include roads and sports fields, including a multi-use artificial turf

³⁸ Federal Emergency Management Agency, 2016. *Flood Insurance Rate Map Solano County, California and Incorporated Areas*. Map Number 06095C0456F. August 3.

field. These facilities have limited potential to impede or redirect flood flows in the event of an extreme storm. Structures planned as part of the project would be built to protect occupants and minimize property damage in the event of a flood. All planned development under the proposed project would fully comply with Chapter 8A – Flood Damage Prevention of the City’s Municipal Code, which requires that uses vulnerable to floods be protected against flood damage at the time of initial construction. Therefore, impacts related to flooding would be less than significant.

i. Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Less Than Significant Impact)

Twenty-two dams are located in Solano County; eight of which are classified as High Hazard, ten as Significant Hazard, and four as Low Hazard. According to the National Inventory of Dams, six additional dams are identified as having potential inundation in the County in the event of a dam failure. The two dams that would cause the most inundation and damage if they were breached while at full capacity are the Monticello (Lake Berryessa) and Lake Herman Dams. In addition, dams are located in neighboring counties which, if breached, may cause flooding in Solano County. These include the dams at Lake Madigan, Lake Curry and Lake Frey.³⁹ The project site could be impacted if the Gordon Valley Dam at Lake Curry were to fail catastrophically. Catastrophic structural dam failure can be caused by an earthquake or overflow. The Gordon Valley Dam is under the jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DWR).⁴⁰ Existing dams under DWR’s jurisdiction are periodically inspected to ensure that they are adequately maintained and to inform the dam owners of any identified deficiencies. Regular inspections and required maintenance of the dams substantially reduce the potential for catastrophic failure. Existing dam inspection and maintenance programs ensure that dam failures remain a very low probability event. Therefore, this impact is less than significant.

j. Would the project be inundated by seiche, tsunami, or mudflow? (No Impact)

The project site is surrounded by urban and developed areas, and is therefore not subject to mudflows. The project site is not located within a mapped tsunami inundation area for Solano County,⁴¹ and no seismically induced seiche waves have ever been documented in the San Francisco Bay Area.⁴² Therefore, the proposed project would not expose people or structures to inundation by seiche, tsunami, or mudflow.

³⁹ Solano County Office of Emergency Services, 2017, op. cit.

⁴⁰ California, State of, 2018.

⁴¹ California, State of, 2018. California Emergency Management Agency. Solano County Inundation Maps. <https://www.conservation.ca.gov/cgs/Pages/Tsunami/Maps/Solano.aspx> (accessed March 29, 2019).

⁴² Association of Bay Area Governments and Metropolitan Transportation Commission, 2017. *Plan Bay Area 2040 Final Environmental Impact Report*. July 16.

3.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.10.1 Impact Analysis

a. Would the project physically divide an established community? (No Impact)

The physical division of an established community typically refers to the construction of a feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The project site is located in an urban area and is surrounded by commercial, residential, and recreational uses. The proposed project would include the renovation of the existing Allan Witt Community Park, including the refurbishment of existing park recreation facilities, as well as, construction of new recreation opportunities. Access to the project site would be provided via existing roads and driveways. The proposed project would not result in the realignment or closure of any existing roads. Therefore, the proposed project would not result in the physical division of an established community or adversely affect the continuity of land uses in the vicinity.

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? (No Impact)

The project site is located within an urban area in the City of Fairfield. The project site encompasses 48 acres of land that is comprised of two parcels. The entire project site is currently developed with the Allan Witt Community Park. The project site is surrounded by commercial, residential, and recreational uses.

The project site is located within the City of Fairfield and is subject to the land use and zoning designations of the City of Fairfield General Plan (2016) and relevant portions of the City of Fairfield Municipal Code Zoning Regulations Chapter 25 (1999, as amended through 2018).

Following is an evaluation of the proposed project's consistency with applicable goals and policies of the General Plan and Zoning Ordinance. In reviewing this section, it is important to understand that the determination of whether a project is consistent with a specific policy can be subjective, and that consistency determinations are best made with a broad understanding of the often-competing policy objectives in a planning document. As a result, policy consistency determinations are ultimately made by the local decision-making body. The City is the lead agency for environmental review, therefore, the City Council would determine the proposed project's consistency with the City's applicable plans and policies. The analysis in this chapter provides decision makers with a list of the goals and policies that are pertinent to the proposed project and the project site, and a recommendation regarding whether or not the proposed project would directly conflict with relevant planning directives. These recommendations are intended to supplement decision-makers' own understanding of the various policy considerations. A conflict with an applicable policy is not itself a significant impact unless it results in a significant environmental impact, as described below.

Per CEQA Guidelines, policy conflicts do not, in and of themselves, constitute significant environmental impacts. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. As such, associated physical environmental impacts are discussed in this Initial Study under specific topical sections.

General Plan. The City's General Plan designates the site as Recreation. The Recreation designation is intended for land that has been improved for active recreational uses. Generally, uses in this category include regional, community, and neighborhood parks and golf courses.

The proposed project would be consistent with the following applicable General Plan goals and policies as discussed below. In addition, the proposed project would implement a portion of the Community Spaces Initiative, integrated with the Heart of Fairfield Plan and adopted by the City in May 2017.

Objective LU 6. Achieve a maximum public value from permanent open space, recognizing and providing for different types of open space users. (See Objective OS 11 and Policies OS 11.1, OS 11.2, OS 11.3, and OS 11.4)

Objective LU 7. Achieve a maximum amount of open space land permanently available to citizens of Fairfield. (See Objective OS 3, Policies OS 3.1, OS 3.2, Program OS 3.2 A, and Objective OS 4)

Objective OS 11. Maximize public value from open space for recreational uses. (See Objective LU 6)

Policy OS 11.1. Secure public access to open space to the maximum extent feasible.

Objective OS 12. Provide parks that meet the diverse needs of current and future residents.

Policy OS 12.1. Implement the Parks Capital Projects Plan, which identifies desired programs and recreation facility improvements.

Policy OS 12.3. Encourage the establishment of community parks of approximately 40 acres or more at a ratio of 2.0 acres of useable park lands per 1,000 residents. Community parks provide a broad range of fields, facilities, and spaces for sports and other recreational activities suitable, in some cases, for community-wide and even regional populations.

Policy OS 12.6. Develop new recreational venues for softball, soccer, picnicking, and outdoor cultural events.

The proposed project would include the renovation of the existing Allan Witt Community Park with a mix of fields, facilities, and spaces for sports and other recreational activities and would serve community needs and provide opportunities for increased physical activity and social interaction. The proposed project would be compatible with the mix and intensity of uses located within the vicinity of the site, which generally consists of commercial, residential, and recreational uses.

Zoning Ordinance. The project site is within the Recreation (REC) zoning district. The REC district is intended for public and private lands within the City committed to leisure and recreational uses that are primarily open space in character. Allowed uses include parks, golf courses, regional recreation facilities, and similar compatible uses. The REC zoning district is consistent with the Recreational Open Space land use designation of the General Plan. The proposed project would include the renovation of the existing Allan Witt Community Park and would not change the existing land use.

The proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

c. Would the project conflict with any applicable habitat conservation plan or natural community conservation plan? (No Impact)

Refer to Section 3.4.1.f. The proposed project would have no impact related to any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

3.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. 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?	☐	☐	☐	☒
b. 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?	☐	☐	☐	☒

3.11.1 Impact Analysis

- a. *Would the project 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? (No Impact)*

The City of Fairfield includes two currently inactive quarries.⁴³ The project site is not located on either of these sites. Additionally, the project site is not located within a Resource Conservation overlay on the City of Fairfield's General Plan Land Use Map.⁴⁴ Therefore, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State, and there would be no impact related to the availability of mineral resources.

- b. *Would the project 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? (No Impact)*

Please refer to Section 3.11.1.a. The proposed project would not result in the loss of availability of any known locally important mineral resource recovery site. Therefore, no impact related to the availability of a mineral resources recovery site would occur.

⁴³ Fairfield, City of, 2013. *City of Fairfield General Plan*, Open Space, Conservation, and Recreation Element. August.

⁴⁴ Fairfield, City of, 2015. *City of Fairfield General Plan*, Land Use Diagram. December.

3.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☒	☐
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.12.1 Impact Analysis

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} , the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted

decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies, including, as appropriate, the City of Fairfield.

The City of Fairfield addresses noise in the Health and Safety Element of the General Plan⁴⁵ and in the Municipal Code.⁴⁶ The Health and Safety Element of the General Plan provides the City's objectives, policies, and programs related to noise, including the land use compatibility guidelines for community exterior noise environments. The Health and Safety Element also sets standards for maximum allowable noise exposure to ground transportation noise sources, as shown in Table 7, and noise-level performance standards for new projects affected by or including non-transportation sources, as shown in Table 8.

Table 7: Maximum Allowable Noise Exposure to Ground Transportation Noise Sources

Land Use	Outdoor Activity Areas ^a	Interior Spaces	
	$L_{dn}/CNEL$, dB	$L_{dn}/CNEL$, dB	L_{eq} , dB ^b
Residential	60 ^c	45	-
Transient lodging	60 ^c	45	-
Hospitals, nursing homes	60 ^c	45	-
Theaters, auditoriums, music halls	-	-	35
Churches, meeting halls	60 ^c	-	40
Office buildings	-	-	45
Schools, libraries, museums	-	-	45
Playgrounds, neighborhood parks	70	-	-

Source: City of Fairfield (2004).

Notes:

^a Where the location of outdoor activity areas is unknown, the exterior noise-level standard shall be applied to the property line of the receiving land use.

^b As determined for a typical worst-case hour during periods of use.

^c Where it is not possible to reduce noise in outdoor activity areas to 60 dB $L_{dn}/CNEL$ or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB $L_{dn}/CNEL$ may be allowed provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with this table.

⁴⁵ Fairfield City of, 2004. *City of Fairfield General Plan Health and Safety Element*. October.

⁴⁶ Fairfield, City of, 2018. *Fairfield Municipal Code, Article X. Noise Regulations*. September 18.

Table 8: Noise-Level Performance Standards for New Projects Affected by or Including Non-Transportation Sources

Land Use	Noise Level Descriptor	Exterior Noise-Level Standard (Applicable at Property Line)		Interior-Noise Level Standard	
		Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Residential	L _{eq}	50	45	40	35
	L _{max}	70	65	60	55
Transient lodging, hospitals, nursing homes	L _{eq}	-	-	40	35
	L _{max}	-	-	60	55
Theaters, auditoriums, music halls	L _{eq}	-	-	35	35
Churches, meeting halls	L _{eq}	-	-	40	40
Office buildings	L _{eq}	-	-	45	-
Schools, libraries, museums	L _{eq}	-	-	45	-
Playgrounds, parks	L _{eq}	65	-	-	-

Source: City of Fairfield (2004).

Notes

Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or recurring impulsive noises. These noise-level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwelling)

In addition, the City addresses noise in Article X, Noise Regulations, of the City's Municipal Code. The Municipal Code limits construction activities to between the hours of 7:00 a.m. and 10:00 p.m. The Municipal Code also prohibits operating, playing or permitting the operation or playing of any radio, television, phonograph, drum, musical instrument, sound amplifier, or similar device, which produces, reproduces or amplifies sound in any place of public entertainment such that the noise level at the property line disturbs a reasonable person owning, using, or occupying property in the neighborhood or that exceeds the standards set forth in Table 8 above.

Certain land uses are considered more sensitive to noise than others. Examples of these sensitive land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is surrounded by a mix of uses within a developed area of the City, including residential, commercial, school and religious uses. The closest sensitive receptors to the proposed project include the single-family residences located immediately west of the project site and the multi-family residences located immediately east of the project site.

To assess existing noise levels, LSA conducted noise monitoring to establish the existing ambient noise environment at the project site. Three short-term (15-minute) and one long-term (24-hour) noise measurements were conducted at the project site from December 18, 2018 to December 19, 2018. Noise measurement data collected during the noise monitoring are summarized in Table 9. As shown in Table 9, the short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 46.2 dBA to 57.8 dBA L_{eq}. The long-term measurement resulted in a daily noise level of 56.0 dBA CNEL. Vehicle traffic on West Texas Street, and Woolner Avenue was reported as the primary noise source. The meteorological data conditions at the time of the noise monitoring are shown in Table 10. Noise measurement sheets are provided in Appendix B.

Table 9: Short-Term Ambient Noise Monitoring Results, dBA

Location Number	Location Description	Start Time	L_{eq}/C_{NEL}^a	L_{max}^b	L_{min}^c	Primary Noise Sources
ST-1	Northeast area of park	11:45 a.m.	55.5	67.8	46.9	Traffic on West Texas Street
ST-2	Southeast area of park	12:14 p.m.	57.8	72.4	43.1	Traffic on Woolner Avenue
ST-3	West area of park	12:41 p.m.	46.2	79.0	41.3	Traffic on Woolner Avenue
LT-1	East side of project on lamp post	11:00 a.m.	54.5/ 56.0	62.1	43.3	Traffic on West Texas Street and Woolner Avenue

Source: LSA (December 2018).

- ^a L_{eq} represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements. C_{NEL} is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
- ^b L_{max} is the highest sound level measured during the measurement time period.
- ^c L_{min} is the lowest sound level measured during the measurement time period.

Table 10: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Average Wind Speed (mph)	Maximum Wind Speed (mph)	Temperature (°F)	Humidity (%)
ST-1	1.5	3.5	57.4	82
ST-2	1.2	3.0	59.4	77
ST-3	0.9	2.8	64.0	60

Source: LSA (December 2018).

- a. Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less Than Significant with Mitigation)*

The following section describes how the short-term construction and long-term operational noise impacts of the proposed project would be less than significant with mitigation.

Short-Term (Construction) Noise Impacts. Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table 8 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the

FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 8, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA $L_{\max}$ with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during grading and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 11 lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 87 dBA $L_{\max}$ at 50 feet during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

Table 11: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet ¹
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).

Note: Noise levels reported in this table are rounded to the nearest whole number.

¹ Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.

L_{max} = maximum instantaneous sound level

As discussed in the Project Description, the proposed project would be constructed in four phases over a 5-year period. Construction of Phase 1 would commence in April 2019 and would extend for approximately 6 months. Phase 1 would include the construction of an interim police access road near the skate park, removal of graffiti from skate surface, adding controlled access fence, and demolition of restroom/concession stand. Other construction details (e.g., construction of future phases and construction fleet activities) are not yet known; therefore, this analysis assumes that a dump truck and scraper would be operating simultaneously during construction of the planned challenger field, practice field, play area, and parking lot. Based on the typical construction equipment noise levels shown in Table 11, noise levels associated with a dump truck and scraper operating simultaneously would be approximately 87 dBA L_{max} at 50 feet.

As noted above, the closest sensitive receptors to the proposed project include the single-family residences located immediately west of the project site and the multi-family residences located immediately east of the project site. The single-family residences' rear yards face the park's western property line. The construction footprint for the planned challenger field, practice field, and play area would be approximately 20 feet from the nearest single-family residential property line and the construction footprint for the planned parking lot near the southwestern corner of the project site would be approximately 20 feet from the nearest single-family residential property line. The

construction footprint for the planned parking lot near the eastern border of the project site would be approximately 20 feet from the nearest multi-family residential property line.

At 20 feet, there would be an increase of approximately 8 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area. Therefore, the closest sensitive receptor may be subject to short-term maximum construction noise reaching 95 dBA L_{max} during construction. However, construction equipment would operate at various locations within the 48 -acre project site and would only generate this maximum noise level when operations occur closest to the receptor.

Construction of the proposed project would occur during daylight hours, from approximately 8:00 a.m. to 5:00 p.m. daily. Construction noise is permitted by the City of Fairfield when activities occur between the hours of 7:00 a.m. and 10:00 p.m. In addition, Mitigation Measure NOI-1 would be required to limit construction activities to daytime hours and would reduce potential construction period noise impacts for the indicated sensitive receptors to less-than-significant levels.

- Mitigation Measure NOI-1:** The project contractor shall implement the following measures during construction of the project:
- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
 - Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
 - Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.
 - Ensure that all general construction related activities are restricted to between the hours of 7:00 a.m. and 10:00 p.m.
 - Designate a "disturbance coordinator" at the City who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Implementation of Mitigation Measure NOI-1 would limit construction hours and require the construction contractor to implement noise reducing measures during construction, which would reduce short-term construction noise impacts to less than significant.

Operational Noise Impacts. The project would generate long-term noise impacts from both traffic and stationary noise sources, as discussed below.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity. A characteristic of sound is that a doubling of a noise source is required in order to result in a perceptible (3 dBA or greater) increase in the resulting noise level.

Trip generation rates for the project were based on the recreation amenity use matrix to account for the various programmed activities on-site, which indicates that the project would generate approximately 329 net new trips on weekdays and approximately 1,088 net new trips on weekends. The adjacent North Texas Street carries approximately 23,031 average daily trips.⁴⁷ Project trips would represent a small increase in noise level, up to approximately 0.2 dBA CNEL based on the following equation:

$$\text{Change in (dBA)} = 10 * \log_{10} \left(\frac{\text{Current Volume}}{\text{Future Volume}} \right)$$

Therefore, project daily trips would not result in a perceptible noise increase along any roadway segment in the project vicinity; therefore, impacts associated with traffic noise would be less than significant.

Stationary Noise Impacts. The proposed project would renovate an existing community park, which could result in an increase in ambient noise levels in the vicinity of the project area associated with outdoor play, spectators, community events, and parking lot noise.

Outdoor Sports Facilities. Implementation of the proposed project could result in an increase in ambient noise levels in the vicinity of the project site associated with the family activity area, sports complex, sports courts, and play area. Outdoor activity typically generates maximum noise levels of 70 dBA $L_{\max}$ at 50 feet.

The closest sensitive receptors to outdoor activity areas include the single-family residences located immediately west of the project site, approximately 20 feet from the planned challenger field, practice field, and play area. At 20 feet, there would be an increase of approximately 8 dBA due to the decreased distance from the baseline noise level of 70 dBA $L_{\max}$ at 50 feet. Therefore, maximum noise levels generated by the fields and play area would be approximately 78 dBA $L_{\max}$ at the closest sensitive receptors. These residences have an 8-foot concrete masonry unit (CMU) wall. LSA calculated the attenuation provided by the wall, and determined that the wall would reduce noise

⁴⁷ Jones & Stokes, 2001. *Draft Program EIR for the Comprehensive Amendment to the City of Fairfield General Plan. Figure 4-2 Daily Traffic Volumes near Residential and Mixed Use Revision Areas.* July. Available at: <https://www.fairfield.ca.gov/civicax/filebank/blobdload.aspx?BlobID=2398> (accessed March 29, 2019).

levels by approximately 13 dBA. Therefore, the closest sensitive receptors would be exposed to a maximum noise level of approximately 65 dBA L_{max} . This noise level would not exceed the City's daytime (7:00 a.m. to 10:00 p.m.) exterior noise level standard of 70 dBA L_{max} . The proposed project would not be operational between 10:00 p.m. and 7:00 a.m., therefore the City's nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standard of 65 dBA L_{max} would not be exceeded. In addition, due to the intermittent nature of outdoor play noise, when averaged over a 1-hour period, this noise level would also be expected to be below the City's daytime standard of 50 dBA L_{eq} and nighttime standard of 45 dBA L_{eq} .

Spectator Noise. In addition, the proposed project would generate spectator noise, such as cheering and whistling, while games are occurring. Based on reference noise measurements conducted by LSA, noise levels associated with spectator noise while games are occurring are approximately 88 dBA L_{max} and 70 dBA L_{eq} at 8 feet. The proposed project would include bleachers at the planned challenge field and practice field. The closest sensitive receptors to the bleachers include the single-family residences located immediately west of the project site, approximately 20 feet from the planned bleachers. At 20 feet, there would be a minimum of 8 dBA reduction in noise levels due to distance from the baseline noise level of 88 dBA L_{max} at 10 feet. Therefore, maximum noise levels generated by spectators at the closest sensitive receptors would be approximately 80 dBA L_{max} and 62 dBA L_{eq} . These residences are shielded by a CMU wall, which would reduce noise levels by approximately 13 dBA. Therefore, the closest sensitive receptors would be exposed to a maximum noise level of approximately 67 dBA L_{max} and 49 dBA L_{eq} . This noise level would not exceed the City's daytime (7:00 a.m. to 10:00 p.m.) exterior noise level standard of 70 dBA L_{max} or 50 dBA L_{eq} . The proposed project would not be operational between 10:00 p.m. and 7:00 a.m., therefore the City's nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standard of 65 dBA L_{max} or 45 dBA L_{eq} would not be exceeded and impacts would be less than significant.

Community Event Noise. The proposed project would include a community gathering area, planned as a large gathering and events space. The community gathering area would host events such as concerts, festivals, performances, movies in the park, as well as reunions, picnics and parties. The large shade shelter would be equipped with infrastructure to accommodate musical equipment, performance lighting and video screens. Community events would include small-scale events and movie nights with attendance as small 100 people, but would also include festivals with up to 5,000 people. Large events would not be held more than twice a year. In addition, the use of a loudspeaker/public address (PA) system for announcements or event starter buzzers/horns could potentially result in increases in ambient noise levels at sensitive receptors in the project vicinity.

The community gathering area activities could result in increased noise levels associated with musical instruments, loudspeakers, and public address (PA) systems for announcements or event starter buzzers/horns. The proposed project does not include any programming of specific events or musical acts. The degree to which noise levels associated with amplified music and loudspeakers would attenuate at the nearest noise sensitive receptors would depend on the distance between the concert amplifier and receptors, intervening structures, the direction in which the amplifiers face, and wind speed and direction. Assuming the amplifiers are placed at the edge of the stage, the closest distance between the amplifiers and the nearest sensitive receptors would be the multi-family residences located east of the project site, approximately 600 feet from the event stage.

The Municipal Code prohibits operating or playing any radio, television, phonograph, drum, musical instrument, sound amplifier, or similar device which produces, reproduces or amplifies sound in any place of public entertainment, such that the noise level at the property line disturbs a reasonable person owning, using, or occupying property in the neighborhood or that exceeds the standards set forth in Table 8 above. Based on the City's standards, daytime noise levels at the nearest sensitive receptors are required to remain below the 50 dBA L_{eq} and 70 dBA L_{max} daytime standards. In addition, nighttime noise levels at the nearest sensitive receptors are required to remain below the 45 dBA L_{eq} and 65 dBA L_{max} nighttime standards.

As noted above, the nearest noise sensitive receptor would be the multi-family residences located east of the project site, approximately 600 feet from the event stage. To meet the 50 dBA L_{eq} standard at the closest residences, assuming an increase of 6 dBA per halving of distance, noise levels generated by the musical instruments or amplified sound would need to be limited to a level of approximately 96 dBA L_{eq} when measured at three feet, assuming that the source is facing the receptor.

Due to the varying noise levels that may be generated depending on the particular event, the number of instruments being used, the type of music, and most importantly the speaker volume from the amplification equipment used, precise noise levels associated with future events would vary, but could exceed the City's exterior noise level requirements.

Implementation of Mitigation Measure NOI-2 would ensure that noise levels generated by the loudspeakers or other event noise do not create noise impacts on the residential uses in the vicinity of the project site:

- Mitigation Measure NOI-2:** The City shall implement the following measures to reduce potential loudspeaker and community event noise impacts at nearby sensitive receptors during community events in which amplification equipment would be used:
- Prior to the use of amplifiers, the system shall be set up early enough to enable alignment and orientation to be optimized to minimize noise disturbance. A sound test prior to each event shall be conducted to ascertain the maximum level that can be set in order to meet the Noise Ordinance standards.
 - During the first three events that utilize amplified speakers and are representative of typical future events, noise monitoring shall be conducted at adjacent receptor locations such that compliance with the noise ordinance can be determined and verified. If it is discovered that noise level impacts exceed the City's exterior noise level requirements of the noise ordinance (50 dBA L_{eq}), noise reduction would be recommended by an acoustical engineer, which may include, but shall not be limited to, speaker noise level restriction and/or noise barriers.

- All amplified sound shall be prohibited between the hours of 10:00 p.m. and 7:00 a.m., as any amplified sound or music on the site could be audible at adjacent properties.

With implementation of this mitigation measure, loudspeaker and community event noise would not result in a substantial increase in noise levels.

Parking Lot Noise. Parking lot noise on the site and on nearby streets (including engine sounds, car doors slamming, car alarms, loud music, and people conversing) would occur as a result of the proposed project. Typical parking lot activities, such as people conversing or doors slamming, generates approximately 60 dBA to 70 dBA L_{max} at 50 feet.

The closest sensitive receptors to the planned parking lot include the single-family residences located approximately 25 feet west of the project site. At 25 feet, there would be a 6 dBA increase in noise levels due to distance from the baseline noise level of 60 dBA to 70 dBA L_{max} at 50 feet. Therefore, maximum noise levels generated by parking lot activities at the closest single-family residences would be approximately 66 dBA to 76 dBA L_{max} . However, these residences have a CMU wall which would reduce noise levels by approximately 13 dBA. Therefore, the closest sensitive receptors would be exposed to a maximum noise level of approximately 53 dBA to 63 dBA L_{max} . This noise level would not exceed the City's daytime (7:00 a.m. to 10:00 p.m.) exterior noise level standard of 70 dBA L_{max} . The proposed project would not be operational between 10:00 p.m. and 7:00 a.m., therefore the City's nighttime (10:00 p.m. to 7:00 a.m.) exterior noise level standard of 65 dBA L_{max} would also not be exceeded. In addition, due to the intermittent nature of parking lot activity, when averaged over a 1-hour period, this noise level would also be expected to be below the City's daytime standard of 50 dBA L_{eq} and nighttime standard of 45 dBA L_{eq} . Therefore impacts would be less than significant.

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Less Than Significant Impact)

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This level is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic

significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur, and no vibration impact analysis of on-road vehicles would be necessary. Therefore, once constructed, the proposed project would not contain uses that would generate groundborne vibration. This impact would be less than significant.

Construction Vibration. Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damage using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table 12 shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 12, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residents and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$\begin{aligned}L_{\text{dB}}(D) &= L_{\text{dB}}(25 \text{ ft}) - 30 \log(D/25) \\ \text{PPV}_{\text{equip}} &= \text{PPV}_{\text{ref}} \times (25/D)^{1.5}\end{aligned}$$

Table 12: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L _v at 25 feet	
	PPV (in/sec)	L _v (VdB) ^a
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

^a RMS vibration velocity in decibels (VdB) is 1 μ in/sec.

μ in/sec = micro-inches per second

FTA = Federal Transit Administration

in/sec = inches per second

L_v = velocity in decibels

PPV = peak particle velocity

RMS = root-mean-square

VdB = vibration velocity decibels

Table 13 lists the projected vibration level from various construction equipment expected to be used on the project site to the nearest buildings in the project vicinity. For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest surrounding land uses to the project site are the commercial and multi-family residential uses adjacent to the project's eastern property line and the single-family residential uses adjacent to the project's western property line. Due to building setbacks, the commercial buildings are located approximately 20 feet east of the project site, the single-family residential buildings are located approximately 25 feet west of the project site, and the multi-family residential buildings are located approximately 25 feet east of the project site.

Table 13: Summary of Construction Equipment and Activity Vibration

Land Use	Direction	Equipment/Activity	Reference Vibration Level (VdB) at 25 feet	Reference Vibration Level (PPV) at 25 feet	Distance (feet)	Maximum Vibration Level (VdB)	Maximum Vibration Level (PPV)
Commercial	East	Large Bulldozers	87	0.089	20	90	0.124
		Loaded Trucks	86	0.076	20	89	0.106
Single-Family Residential	West	Large Bulldozers	87	0.089	25	87	0.089
		Loaded Trucks	86	0.076	25	86	0.076
Multi-Family Residential	East	Large Bulldozers	87	0.089	25	87	0.089
		Loaded Trucks	86	0.076	25	86	0.076

Source: Compiled by LSA (December 2018).

Note: The FTA-recommended building damage threshold is 0.2 PPV (in/sec) or approximately 94 VdB at the receiving property structure or building.

FTA = Federal Transit Administration

in/sec = inch(es) per second

PPV = peak particle velocity

VdB = vibration velocity decibel(s)

As shown in Table 13, the commercial uses would experience vibration levels of up to 90 VdB (0.124 PPV [in/sec]) and the single- and multi-family residential uses would experience vibration levels of up to 87 VdB (0.089 PPV [in/sec]). This vibration level at the nearest buildings from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. Although construction vibration levels at the nearest buildings would have the potential to result in annoyance, these vibration levels would no longer occur once construction of the project is completed. Therefore, groundborne vibration impacts from construction activities associated with the proposed project would be considered less than significant.

c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Less Than Significant Impact)

As discussed above, audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Implementation of the proposed project would not result in substantial increases in traffic noise levels on local roadways in the project vicinity or operational noise at sensitive receptor locations with implementation of Mitigation Measure NOI-2. Therefore, project-related noise increases would be less than significant.

d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Less Than Significant Impact)

Although there would be temporary high intermittent construction noise in the project area during project construction, construction of the proposed project would not significantly affect land uses adjacent to the project site. In addition, construction of the project would comply with the hourly limits specified by the City, as required by Mitigation Measure NOI-1. Therefore, the project would not result in a substantial temporary or periodic increase in ambient noise levels and this impact would be less than significant.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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? (Less Than Significant Impact)

The project area is not located within an airport land use plan, or within two miles of a public airport or public use airport. The closest airport to the project site is Travis Air Force Base, which is located approximately 5 miles east of the project site. In addition, Napa County Airport is located approximately 13.1 miles southwest of the project site. The project area is located within Zone D as specified in the Travis Air Force Base Land Use Compatibility Plan.⁴⁸ However, limitations on the height of structures and notice of aircraft overflights are the only compatibility factors within Zone D. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 55 dBA CNEL noise contours of any of these public airports or private airfields. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels due to the proximity of a public airport. This impact would be less than significant.

⁴⁸ ESA, 2015, op. cit.

- f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)*

The project is not located within the vicinity of a private airstrip. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels due to the proximity of a private airport. There would be no impact.

3.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.13.1 Impact Analysis

- a. *Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)*

The proposed project entails refurbishment and renovation of facilities within an existing park. Existing park staff or their hired maintenance contractors would operate and maintain park facilities. No increase in employment is anticipated as a result of project implementation. The proposed project would not include any new housing, commercial or industrial space, result in the conversion of adjacent land uses, or provide access to previously inaccessible areas. It would not provide additional major infrastructure or increase the capacity of the existing water system. Therefore, the proposed project would not directly or indirectly induce substantial population growth.

- b. *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (No Impact)*

The project site is currently developed with the Allan Witt Community Park and no permanent housing is located on the project site. As such, development of the proposed project would not remove existing housing, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur.

- c. *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (No Impact)*

Refer to Section 3.13.1.b. The proposed project would not displace any people and would not require the construction of replacement housing. Therefore, no impact would occur.

3.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. 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:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

3.14.1 Impact Analysis

- a. *Would the project 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:*

i. *Fire protection? (Less Than Significant Impact)*

The Fairfield Fire Department (FFD) provides fire protection and life safety services to the project site. The FFD continuously operates five fire stations, each of which includes an engine company with a captain, engineer, and firefighter paramedic. The FFD is currently staffed with 65 sworn firefighters and 6 civilian staff. The FFD responded to 12,414 calls for service in 2016, 70 percent of which were for emergency medical services.⁴⁹ Primary service to the project site would be provided by Fire Station 37, located approximately 1 mile east of the project site at 1200 Kentucky Street.

The proposed project would result in an increase in the daytime population at the project site and incrementally increase the demand for emergency fire service and emergency medical services compared to existing conditions. However, as noted in Section 3.16.1.e, the proposed project would have adequate emergency access.

The FFD would continue providing services to the project site and would not require additional firefighters to serve the proposed project. As noted in Section 3.13.1.a, the proposed project would not substantially result in a direct or indirect increase in population within the City. The

⁴⁹ Fairfield, City of, 2017. *City of Fairfield, California Budget and Financial Plan for the Fiscal Years Ended June 30, 2018 and 2019*. June 20.

construction of a new or expanded fire station would not be required. The proposed project would not result in a significant impact on the physical environment due to the incremental increase in demand for fire protection and life safety services, and the potential increase in demand for services is not expected to adversely affect existing response times to the site or within the City. Therefore, construction and operation of the proposed project would have a less than significant impact on fire protection and safety services and facilities.

ii. Police protection? (Less Than Significant Impact)

The Fairfield Police Department (FPD) provides police protection to the project site. The FPD headquarters is located at 1000 Webster Street, approximately 1.3 miles east of the project site. FPD currently employs 123 sworn police officers. With a current population of 107,684,⁵⁰ existing staffing levels are approximately 1.1 sworn officers per 1,000 residents.⁵¹ As noted in Section 3.13.1.a, the proposed project would not substantially result in a direct or indirect increase in population within the City. The proposed project would result in an increase in the daytime population of the project site and incrementally increase demand for emergency police services to the project site compared to existing conditions. However, FPD would continue to provide services to the project site and would not require additional officers to serve the project site. The construction of new or expanded police facilities would not be required. Therefore, the proposed project would not result in a substantial adverse impact associated with the provision of additional police facilities or services, and impacts to police services represent a less than significant impact.

iii. Schools? (No Impact)

The proposed project does not include the construction of any new residential uses. As described in Section 3.13.1.a, the proposed project would not substantially induce housing or population growth, either directly or indirectly, within the City. Therefore, the proposed project would not result in an increase in the number of school-age children in the area. As such, the proposed project would not increase demand for schools and no impact would occur.

iv. Parks? (No Impact)

The proposed project would include the renovation of the existing Allan Witt Community Park, including upgrades to existing park facilities, as well as construction of new recreation amenities. Implementation of the proposed project would likely increase the use of the site. However, it is not anticipated that such an increase in use would result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreation facilities in the City. The proposed project would serve existing demand from residents of the City; therefore, implementation of the proposed project is not anticipated to increase the use of other existing neighborhood and regional parks or other recreational facilities. Therefore, the proposed project would have no impact on parks.

⁵⁰ Fairfield, City of. About Fairfield. Website: <http://www.fairfield.ca.gov/about/demographics.asp> (accessed March 29, 2019).

⁵¹ Fairfield, City of, 2017, op. cit.

v. Other public facilities? (No Impact)

As noted above, the proposed project does not include the construction of any new residential uses and would not substantially induce housing or population growth, either directly or indirectly, within the City. Therefore, the proposed project would not result in increased demand for other public facilities, such as libraries or community centers, and no impact would occur.

3.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

3.15.1 Impact Analysis

- a. *Would the project 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? (Less Than Significant Impact)*

The proposed project would include the renovation of the existing Allan Witt Community Park, including upgrades to existing facilities, as well as construction of new park amenities. The proposed project would serve existing demand from residents of the City. Implementation of the proposed project would likely increase the use of the site. However, it is not anticipated that such an increase in use would result in a physical deterioration of the facility. Implementation of the proposed project is not anticipated to increase the use of other existing neighborhood and regional parks or other recreational facilities. Therefore, this impact would be less than significant and no mitigation is required.

- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? (Less Than Significant Impact)*

The proposed project would refurbish and rehabilitate an existing recreational facility. Proposed improvements include construction and/or expansion of recreational facilities, which might have an adverse physical effect on the environment as described in the various sections of this Initial Study. The intent of the planning process was to minimize adverse physical effects on the environment. Potential adverse effects on the environment related to the development of the proposed project have been evaluated in this Initial Study. Implementation of the mitigation measures described in this Initial Study would ensure that proposed improvements would not have an adverse physical effect on the environment. With implementation of the mitigation measures described herein, environmental impacts associated with the construction of proposed recreational facilities would be less than significant.

3.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e. Result in inadequate emergency access?	☐	☐	☒	☐
f. Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

The following section is based on the information provided in the Traffic Impact Analysis (TIA) prepared for the proposed project by Fehr and Peers in March 2019. The TIA evaluates the transportation impacts that could result from the proposed project, including impacts associated with traffic congestion, transit services, and pedestrian and bicycle circulation.

Existing Roadway Network. Direct automobile access to the project site is provided by West Texas Street and Woolner Avenue. Regional access to the project site is provided via Interstate 80 and State Route 12. These facilities are described below.

- Interstate 80 (I-80) is a major freeway connecting San Francisco through the northern United States to the East Coast, ultimately ending in New Jersey. The freeway is oriented in a northeast/southwest direction through Fairfield. It provides five lanes in each direction (four mixed-flow lanes and one high-occupancy vehicle lane) through most of Fairfield. The West Texas Street interchange provides access to and from the project site.
- State Route 12 (SR 12) is an east-west expressway starting in Sonoma County to the west and ending at State Route 49 in Calaveras County to the east. In the vicinity of the project site, SR 12 is two lanes in each direction with an interchange at Abernathy Road, signalized intersections at Beck Avenue and Pennsylvania Avenue, and a split interchange at Webster and Jackson-streets serving eastbound and westbound traffic, respectively.

- West Texas Street/Texas Street is an east-west principal arterial that has five lanes in the vicinity of the project site but is reduced to three lanes east of Pennsylvania Avenue (e.g., Texas Street). The three-lane portion of Texas Street has on-street parking on both the north and south sides of the street for most of the corridor. The speed limit on West Texas Street is 40 miles per hour west (mph) of Pennsylvania Avenue, and while there is no posted speed limit on Texas Street between Pennsylvania Avenue and the curve east of Clay Street, the prima facie speed limit in downtown is 25 mph.
- Beck Avenue is a north-south principal arterial with five lanes between SR 12 and West Texas Street. North of West Texas Street, the roadway transitions to two lanes, and then becomes an on-ramp to eastbound I-80. The roadway's speed limit is 35 mph. Pennsylvania Avenue is generally a divided north-south arterial with four lanes and left turn pockets at intersections. The speed limit is 30 mph north of SR 12 and 40 mph south of SR 12. Pennsylvania Avenue turns into Cordelia Road at Cordelia Street.
- Woolner Avenue is an east-west major collector west of Beck Avenue. Woolner links Alan Witt Park and the Fairfield Auto Mall to Downtown Fairfield. In the vicinity of the project site, Woolner Avenue is a two-lane facility providing class II bike lanes and on-street parking.
- Gregory Street links West Texas Street to Woolner Avenue and is one of the very few north-south through streets south of West Texas Street. Gregory Street also provides access to the Fairfield Corporation Yard.
- Fifth Street runs north-south and connects West Texas Street to neighborhoods to the north. Fifth Street starts at the entrance for Allan Witt Park just south of West Texas Street and ends at Michigan Street to the north. On-street parking and sidewalks are available on both sides of Fifth Street, and the speed limit is 25 mph.

Bicycle Facilities. The Fairfield Linear Park multi-use path, a Class I facility, runs to the north of the project site and provides a route for bicyclists (and pedestrians) to cross I-80 and travel to points northeast and southwest. Class II bike lanes are located along Beck Avenue from Diamond Way to Cadenasso Road and along Woolner Avenue between Beck Avenue and Gregory Lane. In 2014, the City installed sharrows along West Texas Street, providing a Class III bicycle route that accesses the project site. Future Class II or IV bike facilities would be implemented as a part of the West Texas Complete Streets Project.

Pedestrian Facilities. Sidewalks along West Texas Street are typically eight feet wide without a landscape buffer. Stamped brick pattern crosswalks and actuated pedestrian signal heads are provided at the West Texas Street/5th Street intersection providing access to and from areas to the north of the park. Sidewalks along Woolner Avenue are typically four feet wide without a landscaped buffer. The lack of traffic signals or stop signs on Woolner Avenue limits controlled pedestrian crossings. An uncontrolled mid-block crossing (crosswalk) of Woolner Avenue is provided near the Little League baseball fields in the southwest corner of the project site. This crosswalk serves Sheldon Elementary School located on the south side of Woolner Avenue and is supplemented with overhead speed feedback/flashing beacons on both the eastbound and

westbound approaches to the crosswalk. The closest marked crossing (crosswalk) of Woolner Avenue to the east is provided at Edwards Way.

Transit Access. Fairfield and Suisun Transit (FAST) serves both West Texas Street and Woolner Avenue adjacent to the project site. Route 1 serves West Texas Street, connecting the Fairfield Transportation Center with north Fairfield. A bus stop adjacent to the project site on West Texas Street is provided for this route. A bus shelter with bench is provided at the stop on the project side of West Texas Street (serving westbound buses). On the north side of West Texas Street the bus stop at 5th Street/Allan Witt Park provides a bus stop, but not a shelter. On weekdays, Route 1 operates on half-hour headways during the morning and evening peak periods and one-hour during the midday period (service from 6:00 a.m. to 8:00 p.m.). Saturday service is provided on one-hour headways from 9:00 a.m. to 6:00 p.m.

Route 5 serves Woolner Avenue adjacent to the project site, connecting the downtown Suisun City and the Suisun Amtrak Station with the Fairfield-Vacaville Train Station. Bus stops are provided for both eastbound and westbound buses at stops near the southeastern (Enterprise Drive) and southwestern (adjacent Little League baseball fields) corners of the project site. No amenities are provided at these bus stops (e.g., benches, shelters, etc.). On weekdays, Route 5 operates on one-hour headways from 6:00 a.m. to 9:00 a.m. and from 6:00 p.m. to 8:00 p.m. Saturday service is provided on one-hour headways from 9:00 a.m. to 6:00 p.m.

3.16.1 Impact Analysis

- a. *Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Less Than Significant with Mitigation Incorporated)*

Overview. The TIA for the proposed project was conducted in accordance with the standards set forth by the City of Fairfield General Plan and the City's Guidelines for Transportation Impact Reports.

The study area is located primarily along West Texas Street and Woolner Avenue, with the majority of project generated vehicle trips expected to use these two facilities to access the project site. Based on the number and distribution of project generated vehicle trips, the following 14 intersections were identified for detailed study:

1. West Texas Street/I-80 WB Ramps
2. West Texas Street/I-80 EB Ramps
3. West Texas Street/Beck Avenue
4. West Texas Street/Shopping Center/Park Crossing

5. West Texas Street/5th Street/Allan Witt Park
6. West Texas Street/Gregory Lane
7. West Texas Street/Pennsylvania Avenue
8. Woolner Avenue/Beck Avenue
9. Woolner Avenue/Allan Witt Park West
10. Woolner Avenue/Allan Witt Park East
11. Woolner Avenue/Gregory Lane
12. Woolner Avenue/Pennsylvania Avenue
13. State Route 12/Beck Avenue
14. State Route 12/Pennsylvania Avenue

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 a.m. and 9:00 a.m. and the PM peak hour typically occurs between 4:00 p.m. and 6:00 p.m. on a regular weekday. These are the peak commute hours during which traffic volume is highest on the roadways in the study area.

Study intersections were evaluated under six different scenarios to determine the proposed project's effects on level of service. These scenarios provide detailed analysis of the incremental effects of the proposed project on traffic conditions, and allow a comparison of the traffic anticipated to be generated by the proposed project to the amount of traffic expected to be generated by future development. Each of the scenarios is described below.

- **Existing Conditions.** The analysis of Existing Conditions was based on traffic counts collected in September 2018. The existing conditions assessment also includes a description of key area roadways and an assessment of bicycle, pedestrian, transit facilities near the site.
- **Existing with Project Conditions.** This traffic scenario provides an assessment of operating conditions under Existing Conditions with the addition of project-generated traffic and transportation network infrastructure proposed by the project. The potential impacts of the proposed project on existing baseline traffic operating conditions were identified in this scenario.
- **Existing Plus Approved Project Conditions (EPAP).** Existing volumes and transportation system plus traffic generated by approved, proposed, and built but not yet occupied projects. Trip generation, distribution and assignment for these projects is based on previously completed studies or manually completed based on data from the ITE Trip Generation Manual, 10th

Edition. This scenario also includes planned and approved roadway network changes, including the planned complete streets project on West Texas Street.

- **Existing Plus Approved Projects with Project Conditions.** This traffic scenario provides an assessment of operating conditions under EPAP with the addition of project-generated traffic and transportation network infrastructure proposed by the project. The potential impacts of the proposed project on EPAP baseline operating conditions were identified in this scenario.
- **Cumulative Conditions.** Year 2035 traffic forecasts without the proposed project were developed for Cumulative Conditions by applying traffic volume growth data derived from the City of Fairfield travel demand model. The growth data were applied to Existing Conditions volumes to arrive at Year 2035 traffic volumes.
- **Cumulative with Project Conditions.** This traffic scenario provides an assessment of operating conditions under Cumulative Conditions with the addition of project-generated traffic and transportation network infrastructure proposed by the project. The potential impacts of the proposed project on Year 2035 baseline traffic operating conditions were then identified in this scenario.

Analysis Methodology. Traffic conditions within the study area were assessed through the evaluation of intersection Levels of Service (LOS). LOS is a qualitative description of operating conditions ranging from LOS A, or free-flowing conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

The method described in Chapter 18 of the Transportation Research Board's 2010 Highway Capacity Manual (2010 HCM) was used to conduct the level of service calculations for the signalized study intersections. The average control delay for signalized intersections was calculated using the Synchro traffic analysis software and correlated to a LOS designation as shown in Table 14.

Table 14: Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay per Vehicle (seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or long cycle lengths.	> 80.0

Source: 2010 Highway Capacity Manual (Transportation Research Board 2010).

The method described in Chapter 19 of the 2010 HCM was used to conduct the level of service calculations for the side-street stop-controlled intersections. For side-street stop-controlled intersections, the worst movement (for multi-lane approaches) or worst approach (for single-lane approaches) delay was used to determine the LOS for the intersection, using the LOS designations shown in Table 15.

Table 15: Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay per Vehicle (seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: 2010 Highway Capacity Manual (Transportation Research Board 2010).

The City of Fairfield General Plan and the City's Guidelines for Transportation Impact Reports note the following LOS standards for intersections in the City of Fairfield:

- Arterial streets – LOS D standard
- Collector streets – LOS C standard
- Local streets – LOS B standard
- Highest functional classification at an intersection controls the classification of the intersection (e.g., at the intersection of an arterial and a collector, the intersection would be classified as arterial).

The *Guidelines for Transportation Impact Reports* notes that several exceptions to the LOS standard are available if maintaining the LOS standard at an intersection results in a safety impact, conflicts with General Plan goals, or is not cost-effective. Based on the above standards and additional guidance from the *Guidelines for Transportation Impact Reports*, the following CEQA impact criteria were developed to evaluate transportation impacts of the proposed project.

Signalized Intersections. The proposed project would have significant impacts to signalized intersection operations if:

- For intersections operating acceptably prior to the implementation of the project: the project would create a significant impact if it would cause the intersection to degrade below its LOS standard:
 - Arterial streets – LOS D standard
 - Collector streets – LOS C standard

- Local streets – LOS B standard
- Highest functional classification at an intersection controls the classification of the intersection (e.g., at the intersection of an arterial and a collector, the intersection would be classified as arterial).
- For intersections operating unacceptably prior to the implementation of the project: the project would create a significant impact if it would result in an increase of greater than 5.0 seconds in the average delay at the intersection (critical movements for arterial intersections).

Side-Street-Stop-Controlled Intersections. The City's *Guidelines for Transportation Impact Reports* notes that small increases in volume at side-street stop-controlled intersections may result in large increases in reported delay. It is therefore difficult to establish fixed significance thresholds based on LOS for these locations. Therefore, the City's *Guidelines for Transportation Impact Reports* suggests the following intersection impact criteria:

- An intersection may be considered to operate acceptably (and thus the impact is less than significant) if the aggregate delay for the worst movement or approach is less than:
 - 4.0 vehicle-hours for a movement on a single lane approach with low volume
 - 5.0 vehicle-hours for a movement on a multilane approach with low volume
- Mitigations are required (and thus the impact is significant) if all of the following criteria are met:
 - The worst movement/approach operates at LOS F
 - The intersection meets California MUTCD Signal Warrant 3A or Warrant 3B (commonly known as the "Peak Hour Signal Warrant")
 - A minimum of 10 vehicles is added to the worst movement/approach

Project Trip Estimates. The amount of traffic expected to be generated by the proposed project and distributed to the local area roadway network was estimated using a three-step process: 1) trip generation; 2) trip distribution; and 3) trip assignment.

As noted in the City's *Guidelines for Transportation Projects*, the typical starting point in the trip generation calculation process relies on data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*,⁵² which includes trip generation data from a variety of land use types based on national statistics collected at analogous facilities. However, the proposed project is unique from a use perspective and many of the planned park facilities were not found to be well represented in the *Trip Generation Manual*. Therefore, the number of vehicle trips that would be generated by the proposed project was estimated using detailed estimates of the number of users anticipated at planned on-site amenities. The number of users anticipated at each of the project's fields/courts/area is shown in Table 1. A detailed description of how activity levels were used to generate the anticipated number of vehicle trips is provided in the TIA.

⁵² Institute of Transportation Engineers, 2018. *Trip Generation Manual, 10th Edition*. March.

Based on trip generation estimates, the proposed project would generate 45 trips during the AM peak hour (27 inbound/18 outbound) and 211 trips during the PM peak hour (114 inbound/97 outbound), as shown in Table 16. While weekend use information is provided in Table 1, weekend trip generation and traffic analysis was not included in the TIA. Peak project usage may occur on the weekend; however, the peak hour of traffic on the City's transportation network will occur during the weekday PM peak hour. Therefore, the analysis of the weekday peak hour was conducted as it represents a conservative worst-case analysis.

Table 16: Project Vehicular Trip Generation

New Park Amenity	Number of Users Per Event	Number of Events During Peak Hour		Number of Trips Per Amenity During Peak Hour					
		AM Peak	PM Peak	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Futsal Soccer Field	20	0	1	0	0	0	13	11	24
All Inclusive Playground ¹	20	1	1	14	0	24	13	11	24
Softball Fields/Multi-use Field	50	0	1	0	0	0	32	27	59
Multi-use Field/Artificial Turf Field	50	0	1	0	0	0	32	27	59
Challenger Little League Baseball Field	20	0	1	0	0	0	13	11	24
Pickle Ball Courts	4	1	1	3	2	5	3	2	5
Small Dog Park ¹	7			5	3	8	4	4	8
Large Dog Park ¹	7			5	3	8	4	4	8
Total	-	-	-	27	18	45	114	97	211

Source: Fehr and Peers, 2019.

¹ Dog Parks and Playgrounds do not host events. The number of users presented is the total anticipated users during the applicable weekday peak hour.

² AVO is 1.7 people per vehicle per the FHWA AVO factor for cars (http://www.fhwa.dot.gov/tpm/guidance/avo_factors.pdf)

³ Peak Hour Inbound/Outbound percentages are based on ITE Trip Generation Manual, 10th Edition, for Public Park (Land Use Code 411): AM Peak Hour: 59% inbound/ 41% outbound; PM Peak Hour: 55% inbound/ 45% outbound

The geographical distribution of trips generated by the project is based on information from the City of Fairfield's Heart of Fairfield Specific Plan and Draft Environmental Impact Report (2017). The Specific Plan encompassed the Downtown and West Texas Street Priority Development Areas, which includes the project site. Since Allan Witt Park is located in downtown Fairfield and the use types would likely have similar travel patterns, the trip distribution used in the Specific Plan is assumed to be accurate for this analysis. Trip distribution patterns for the Specific Plan were based on collected turning movements at intersections and information from the Solano-Napa Travel Demand Model. Figure 6 presents the anticipated project trip distribution. Figure 7 presents the project-generated peak hour traffic volumes at the study intersections.

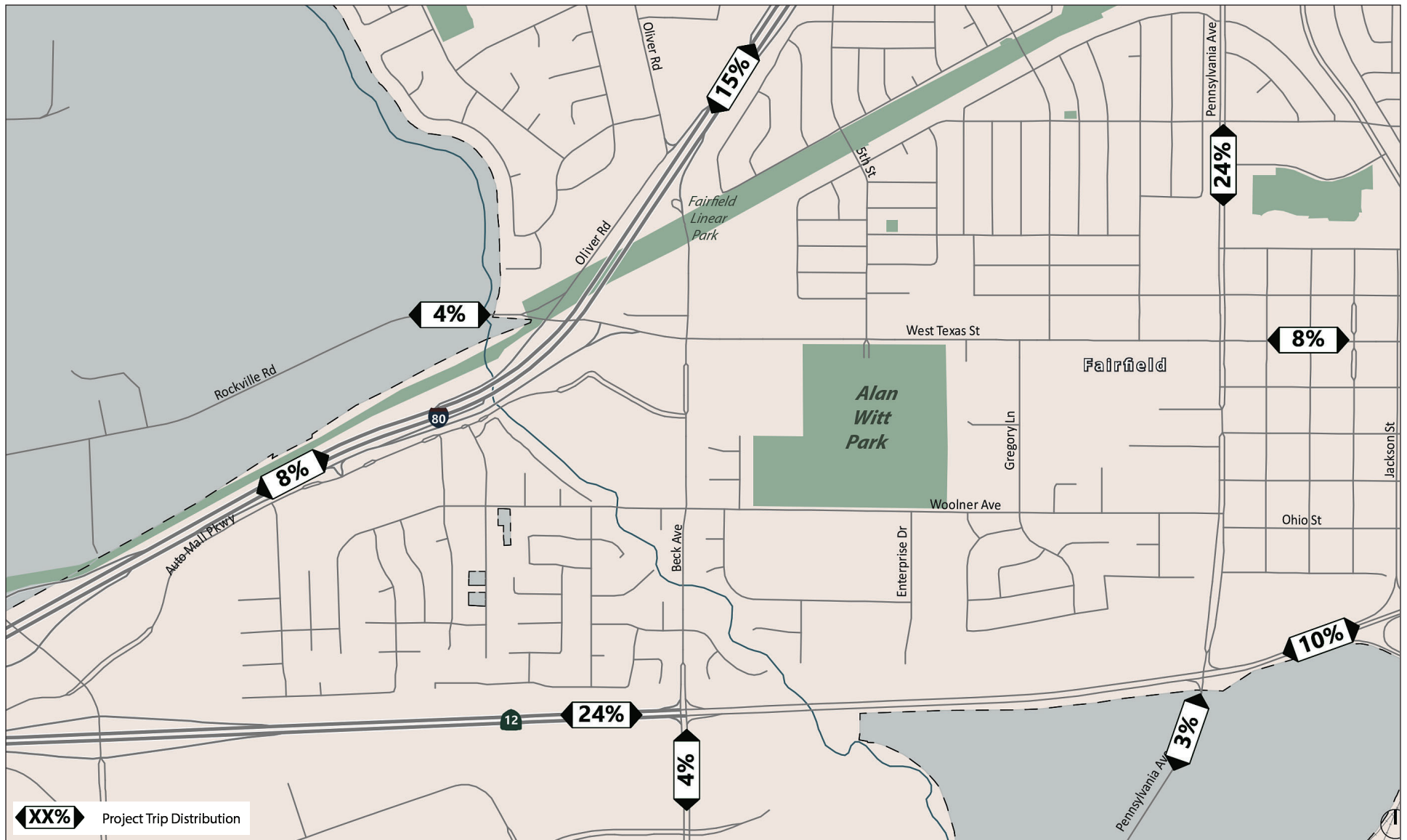
Existing and Existing Plus Project Conditions. Existing traffic volumes are shown in Figure 8 with the results of the intersection LOS analysis under Existing Conditions shown in Table 17. As shown in Table 17, all intersections currently operate at an acceptable LOS during the weekday peak commute hours.

Existing Plus Project traffic volumes are shown in Figure 9 with the results of the intersection LOS analysis under Existing Plus Project Conditions shown in Table 17. As shown in Table 17, all of the study intersections would continue to operate at acceptable LOS during the AM and PM peak hours. Therefore, the proposed project would not result in a significant impact on the operations of any study area intersections under Existing plus Project Conditions.

Existing Plus Approved Project (EPAP) and EPAP with Project Conditions. City staff and Fehr & Peers coordinated to develop a list of projects to include in the EPAP scenario. No land use development projects were identified as approved and not yet constructed in the study area. Thus, the traffic volumes in the Near Term/Existing Plus Approved Projects are the same as the Existing Conditions traffic volumes. A transportation network change in the study area was identified and included in the evaluation of the scenario – the planned complete streets project on West Texas Street. This project would improve bicycle and pedestrian mobility in the corridor by narrowing West Texas Street from four lanes to three lanes from Beck Avenue to Pennsylvania Avenue. The width gained from this modification would be used to widen sidewalks, provide additional landscaping, and install a Class II or Class IV bicycle facility. Both potential options are being evaluated during the preparation of this document.

Existing Plus Approved Project Conditions traffic volumes are shown in Figure 10 with the results of the intersection LOS analysis under EPAP without Project Conditions shown in Table 18. As shown in Table 18, all intersections currently operate at an acceptable LOS.

EPAP with Project traffic volumes are shown in Figure 11 with the results of the intersection LOS analysis under EPAP with Project conditions shown in Table 18. As shown in Table 18, all of the study intersections would continue to operate at acceptable LOS during the AM and PM peak hours. Therefore, the proposed project would not result in a significant impact on the operations of any study area intersections under EPAP with Project Conditions.



LSA

NOT TO SCALE



FIGURE 6

Allan Witt Community Park Renovation Project
Project Trip Distribution (Percentages)

SOURCE: FEHR & PEERS, 2019.

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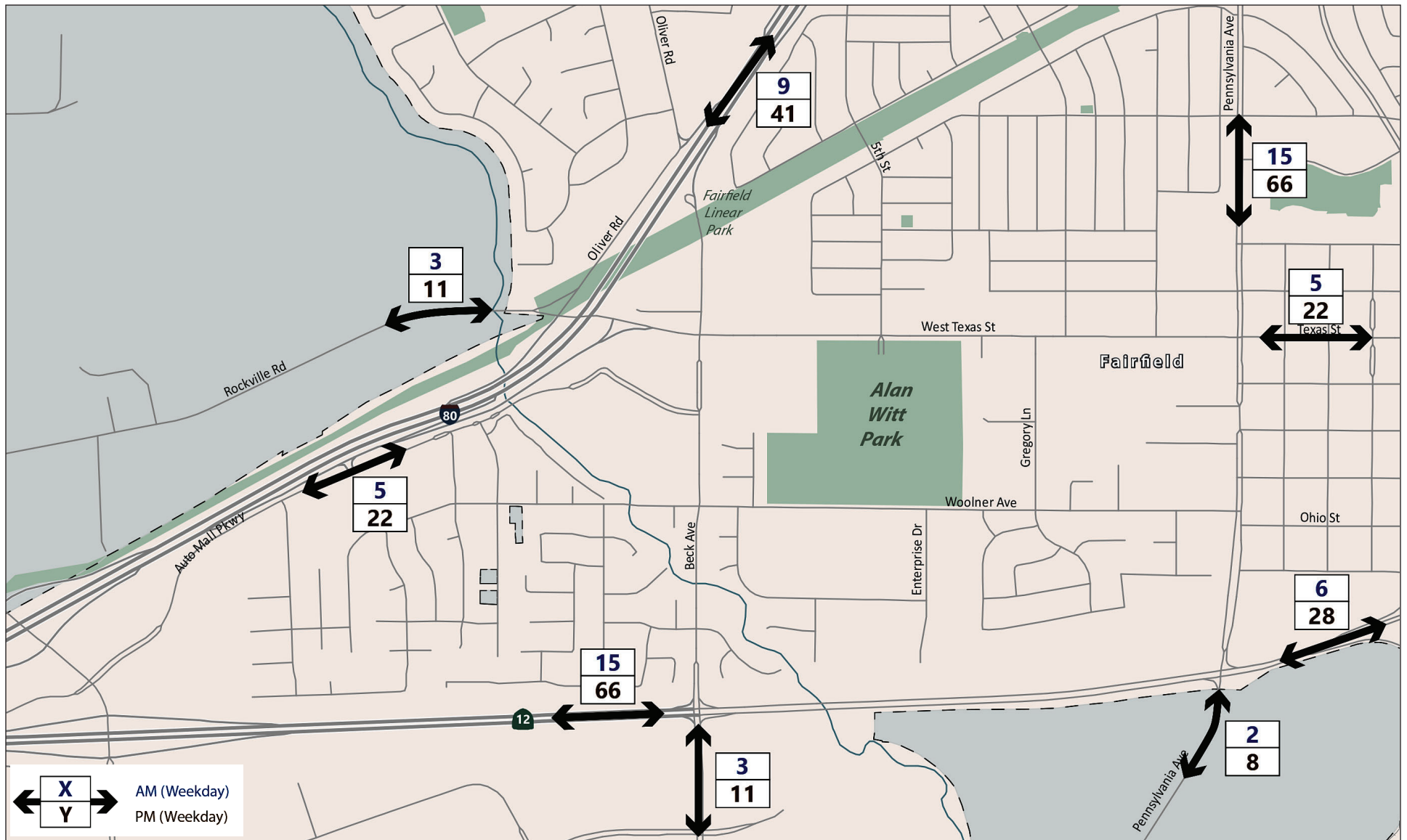


FIGURE 7

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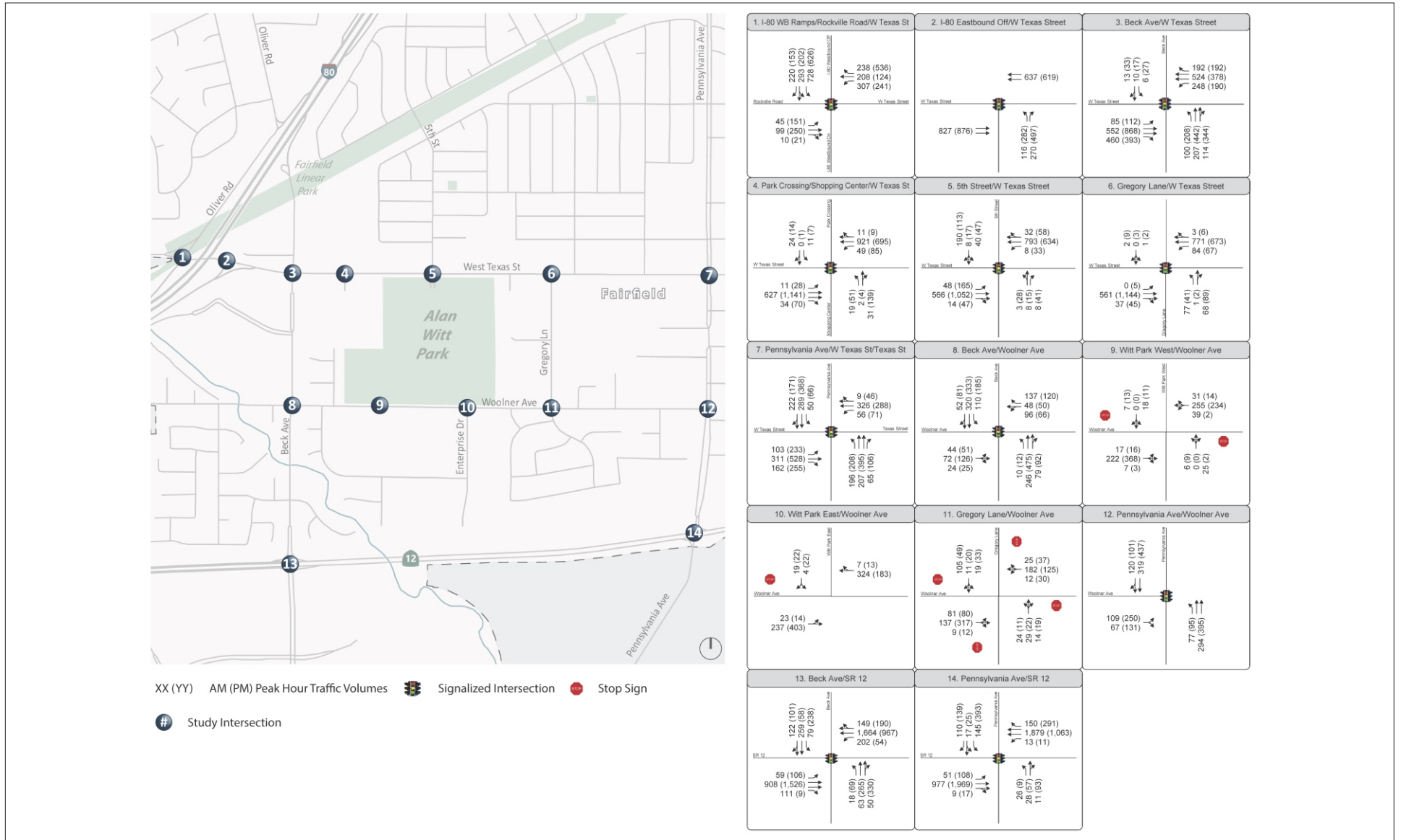
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Allan Witt Community Park Renovation Project
Project Trip Assignment

SOURCE: FEHR & PEERS, 2019.

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LSA

FIGURE 8

NOT TO SCALE
 SOURCE: Fehr and Peers, 2019

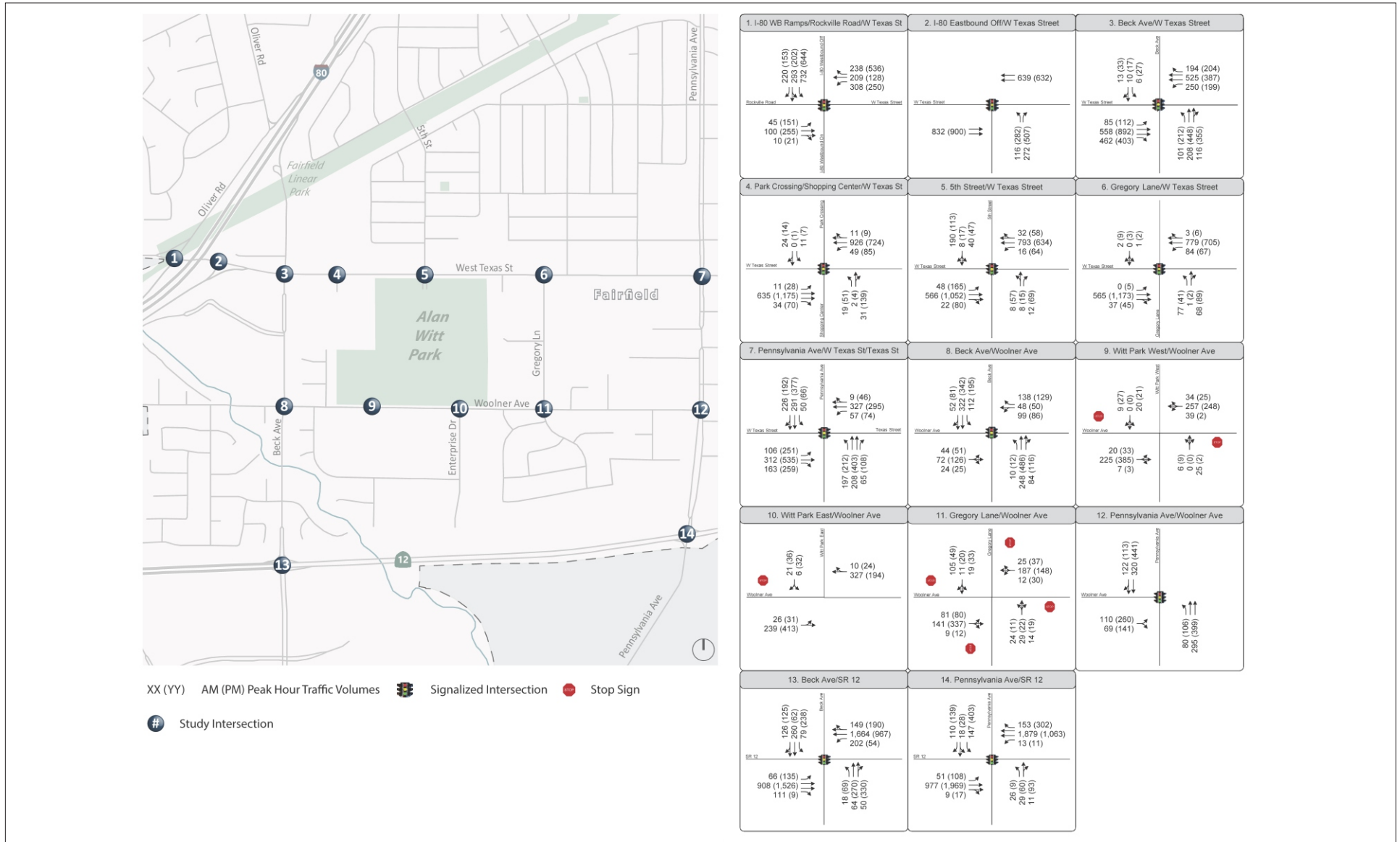
Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Existing Peak Hour Traffic Volumes, Land Configurations and Traffic Controls

Table 17: Existing and Existing Plus Project Intersection Level of Service

	Intersection	Control Type ¹	Peak Hour	Existing		Existing Plus Project	
				Delay ²	LOS	Delay ²	LOS
1	I-80 WB On/Off Ramps & Rockville Road/W Texas Street	Signal	AM	34.5	C	34.5	C
			PM	37.2	D	37.7	D
2	I-80 EB Off Ramp & W Texas Street	Signal	AM	4.7	A	4.7	A
			PM	6.3	A	6.3	A
3	Beck Ave & W Texas Street	Signal	AM	35.1	D	35.3	D
			PM	36.1	D	38.8	D
4	Shopping Center/Park Crossing & W Texas Street	Signal	AM	5.5	A	5.5	A
			PM	28.9	C	25.5	C
5	W Texas Street & 5th Street & Allan Witt	Signal	AM	8.0	A	8.5	A
			PM	21.9	C	22.9	C
6	Gregory Lane & W Texas Street	Signal	AM	4.6	A	4.6	A
			PM	7.6	A	7.5	A
7	Pennsylvania Avenue & W Texas Street/Texas Street	Signal	AM	22.4	C	22.5	C
			PM	28.9	C	30.6	C
8	Beck Avenue & Woolner Avenue	Signal	AM	14.4	B	14.5	B
			PM	14.9	B	15.7	B
9	Woolner Avenue & Allan Witt Park West	SSSC	AM	2.4 (22.5)	A (C)	2.5 (23.0)	A (C)
			PM	0.9 (15.7)	A (C)	1.6 (17.7)	A (C)
10	Woolner Avenue & Allan Witt Park East	SSSC	AM	0.8 (12.4)	A (B)	0.9 (12.9)	A (B)
			PM	1.0 (12.2)	A (B)	1.5 (13.1)	A (B)
11	Gregory Lane & Woolner Avenue	AWSC	AM	10.4	B	10.5	B
			PM	11.9	B	12.6	B
12	Pennsylvania Avenue & Woolner Avenue	Signal	AM	7.6	A	7.7	A
			PM	11.6	B	12.6	B
13	Beck Avenue & State Route 12	Signal	AM	29.9	C	30.4	C
			PM	46.8	D	48.8	D
14	Pennsylvania Avenue & State Route 12	Signal	AM	15.0	B	15.2	B
			PM	44.0	D	46.2	D

Source: Fehr & Peers, 2019.

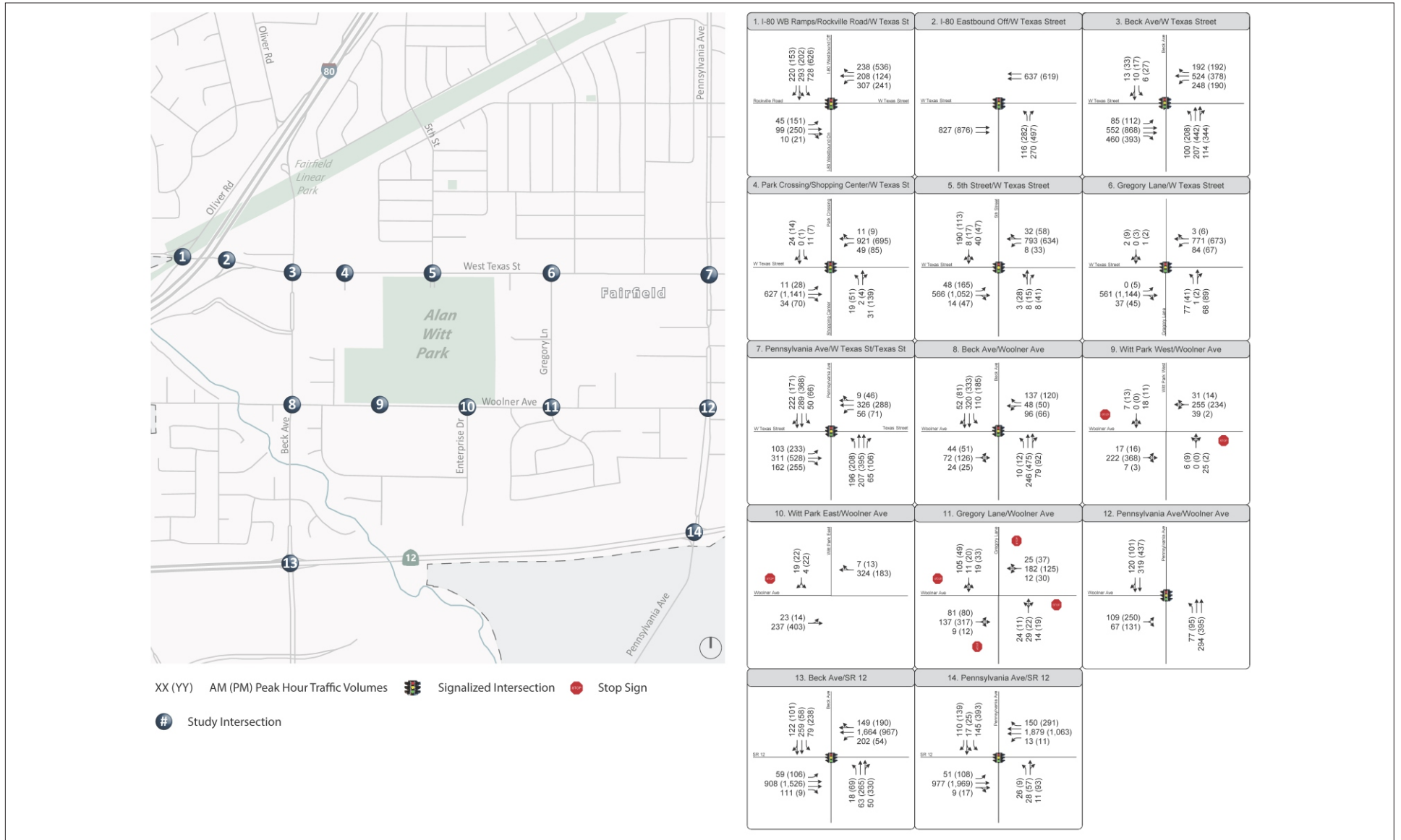
¹ SSSC = Side Street Stop Control, AWSC = All Way Stop Control² Average Delay per Vehicle in Seconds. For side-street, stop-controlled intersections, delay is presented for intersection average (worst movement).



LSA

FIGURE 9

Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Existing With Project Peak Hour Traffic Volumes,
 Land Configurations and Traffic Controls



LSA

FIGURE 10

Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Existing Plus Approved without Project Peak Hour Traffic Volumes,
 Land Configurations and Traffic Controls

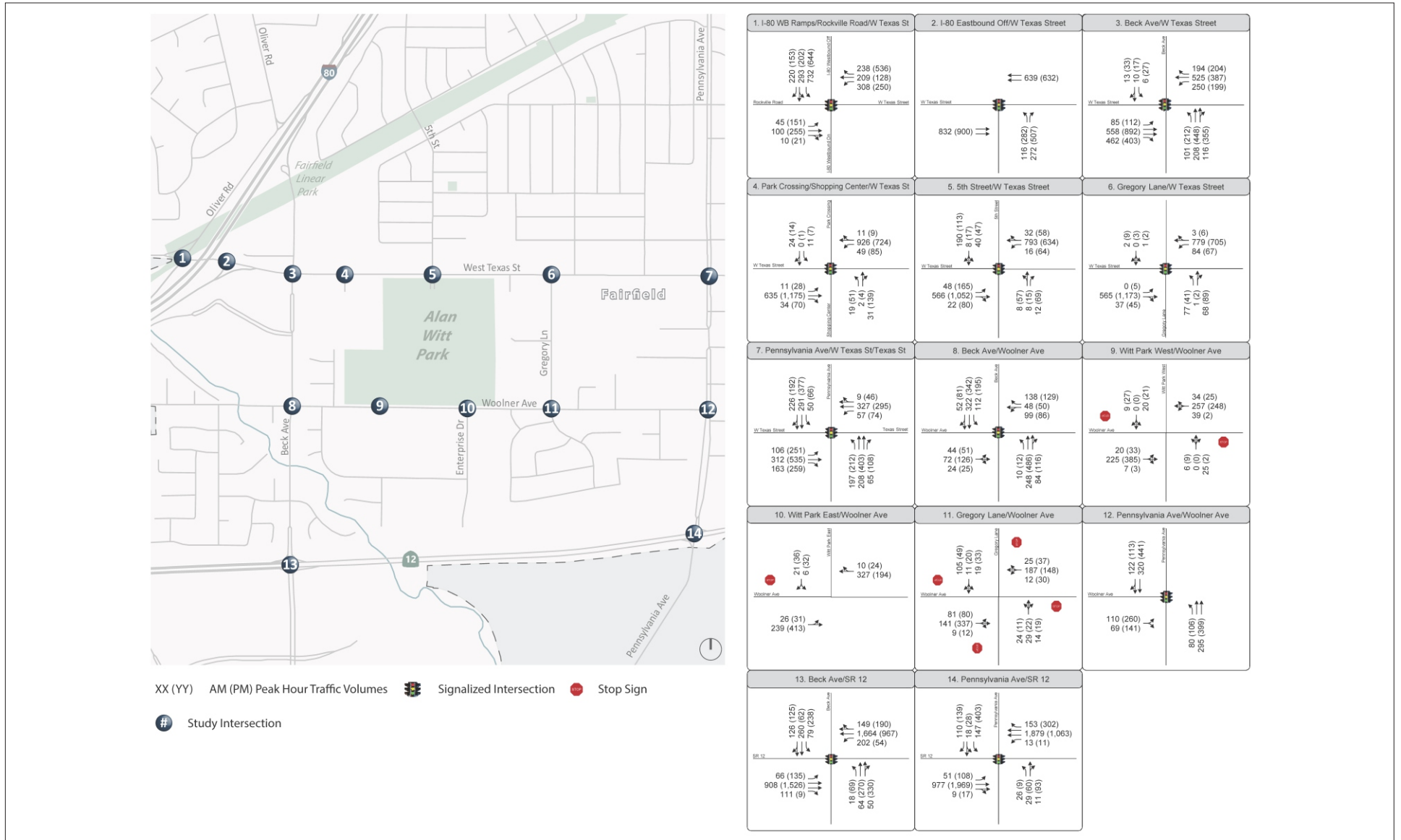
Table 18: EPAP Intersection Level of Service

	Intersection	Control Type ¹	Peak Hour	EPAP		EPAP Plus Project	
				Delay ²	LOS	Delay ²	LOS
1	I-80 WB On/Off Ramps & Rockville Road/W Texas Street	Signal	AM	34.5	C	34.5	C
			PM	37.2	D	37.7	D
2	I-80 EB Off Ramp & W Texas Street	Signal	AM	4.7	A	4.7	A
			PM	6.3	A	6.3	A
3	Beck Ave & W Texas Street	Signal	AM	35.1	D	37.4	D
			PM	36.1	D	37.7	D
4	Shopping Center/Park Crossing & W Texas Street	Signal	AM	5.5	A	7.8	A
			PM	28.9	C	42.6	D
5	W Texas Street & 5th Street & Allan Witt	Signal	AM	8.0	A	8.1	A
			PM	21.9	C	17.4	B
6	Gregory Lane & W Texas Street	Signal	AM	4.6	A	7.1	A
			PM	7.6	A	12.4	B
7	Pennsylvania Avenue & W Texas Street/Texas Street	Signal	AM	22.4	C	22.6	C
			PM	28.9	C	30.7	C
8	Beck Avenue & Woolner Avenue	Signal	AM	14.4	B	14.5	B
			PM	14.9	B	15.7	B
9	Woolner Avenue & Allan Witt Park West	SSSC	AM	2.4 (22.5)	A (C)	2.5 (23.0)	A (C)
			PM	0.9 (15.7)	A (C)	1.6 (17.7)	A (C)
10	Woolner Avenue & Allan Witt Park East	SSSC	AM	0.8 (12.4)	A (B)	0.9 (12.9)	A (B)
			PM	1.0 (12.2)	A (B)	1.5 (13.1)	A (B)
11	Gregory Lane & Woolner Avenue	AWSC	AM	10.4	B	10.5	B
			PM	11.9	B	12.6	B
12	Pennsylvania Avenue & Woolner Avenue	Signal	AM	7.6	A	7.7	A
			PM	11.6	B	12.6	B
13	Beck Avenue & State Route 12	Signal	AM	29.9	C	30.4	C
			PM	46.8	D	48.7	D
14	Pennsylvania Avenue & State Route 12	Signal	AM	15.0	B	15.2	B
			PM	44.0	D	46.2	D

Source: Fehr & Peers, 2019.

¹ SSSC = Side Street Stop Control, AWSC = All Way Stop Control

² Average Delay per Vehicle in Seconds. For side-street, stop-controlled intersections, delay is presented for intersection average (worst movement).



LSA

FIGURE 11

Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Existing Plus Approved with Project Peak Hour Traffic Volumes,
 Land Configurations and Traffic Controls

NOT TO SCALE

SOURCE: Fehr and Peers, 2019

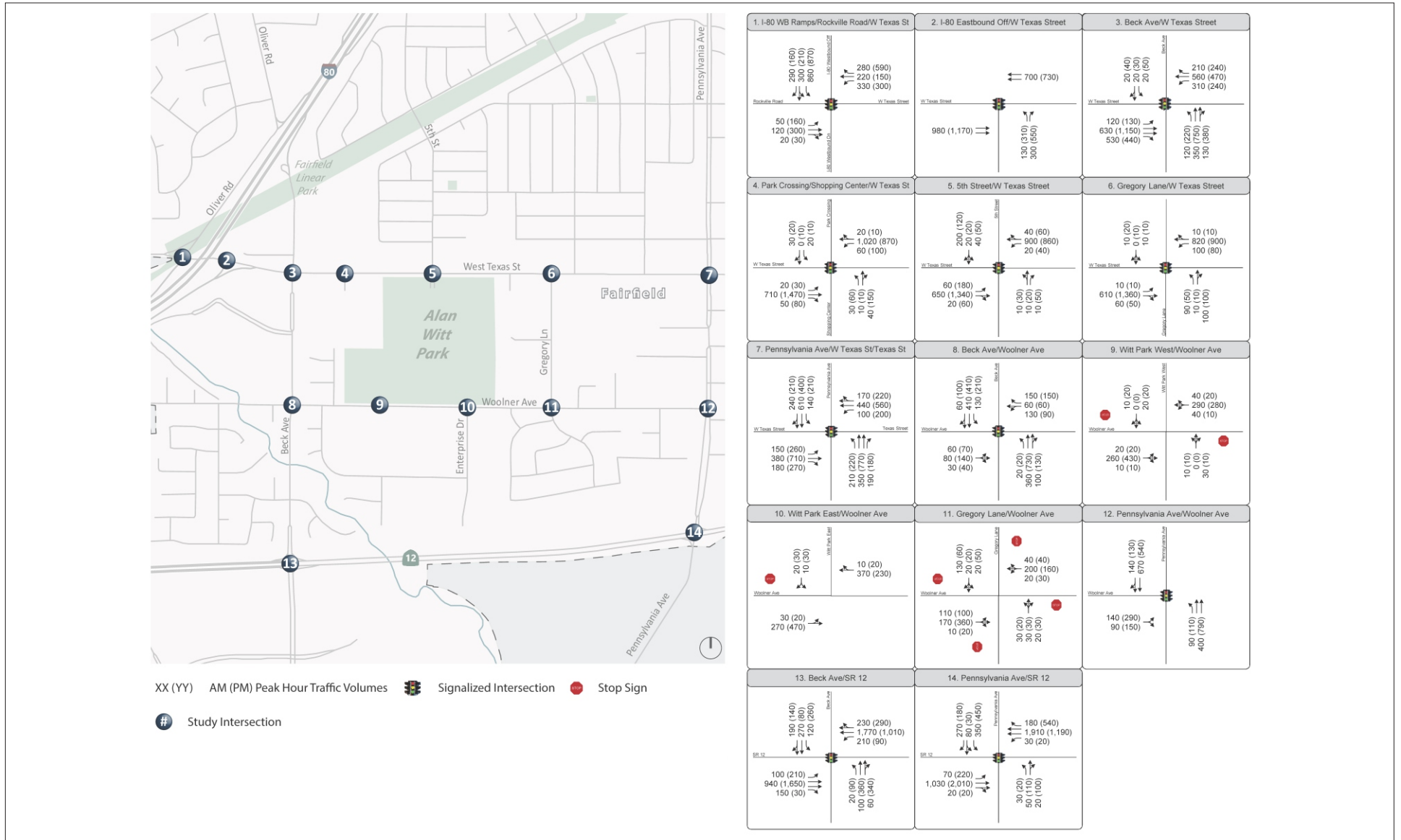
Cumulative and Cumulative Plus Project Conditions. Traffic volumes for Cumulative Conditions are comprised of Existing Conditions volumes plus traffic generated by anticipated local and regional land use growth. Traffic volumes for Cumulative Conditions are shown on Figure 12 with the results of the intersection LOS analysis under Cumulative Conditions shown in Table 19.

Cumulative plus Project traffic volumes are shown in Figure 13 with the results of the intersection LOS analysis under Cumulative plus Project Conditions shown in Table 19. As shown in Table 19, the proposed project would result in slight increases in vehicle delay at most study intersections during morning and evening peak commute hours. However, under the cumulative plus project condition, traffic generated by the proposed project would increase vehicle delay at two project intersections, as follows:

- **West Texas Street/Park Crossing/Shopping Center (Intersection 4):** Traffic generated by the proposed project would increase vehicle delay during evening peak hour from 111.4 seconds per vehicle to greater than 120 seconds per vehicle (both conditions LOS F).
- **West Texas Street/5th Street/Allan Witt Park (Intersection 5):** Traffic generated by the proposed project would increase vehicle delay during evening peak hour from 44.1 seconds per vehicle (LOS D) to 63.9 seconds per vehicle (LOS E).

Therefore, the proposed project would contribute to a significant adverse cumulative impact based on City standards of significance. The following mitigation measures would mitigate the project's contributions to the two cumulative impacts identified above.

Mitigation Measure TRA-1: West Texas Street/Park Crossing/Shopping Center (Intersection 4). The City shall install permissive phasing on the northbound and southbound (Park Crossing/Shopping Center) approaches. The installation of permissive phasing on the north and southbound approaches at this intersection would improve the PM peak hour level of service to E with 75.9 seconds of delay per vehicle in the Cumulative plus Project scenario. With the implementation of this measure, the project's contribution to this significant cumulative impact would be fully mitigated. To implement this mitigation measure, physical improvements would be necessary at the intersection. These improvements would include modifications (narrowing or removal) to the raised medians on the northern and southern approaches and modifications to the curb returns on the north leg to narrow the approach and shorten the pedestrian crossing. These improvements would be required to safely implement permissive phasing on the north and south approaches.



LSA

FIGURE 12

Allan Witt Community Park Renovation Project
1741 West Texas Street, Fairfield, Solano County, California
Cumulative without Project Peak Hour Traffic Volumes,
Land Configurations and Traffic Controls

NOT TO SCALE

SOURCE: Fehr and Peers, 2019

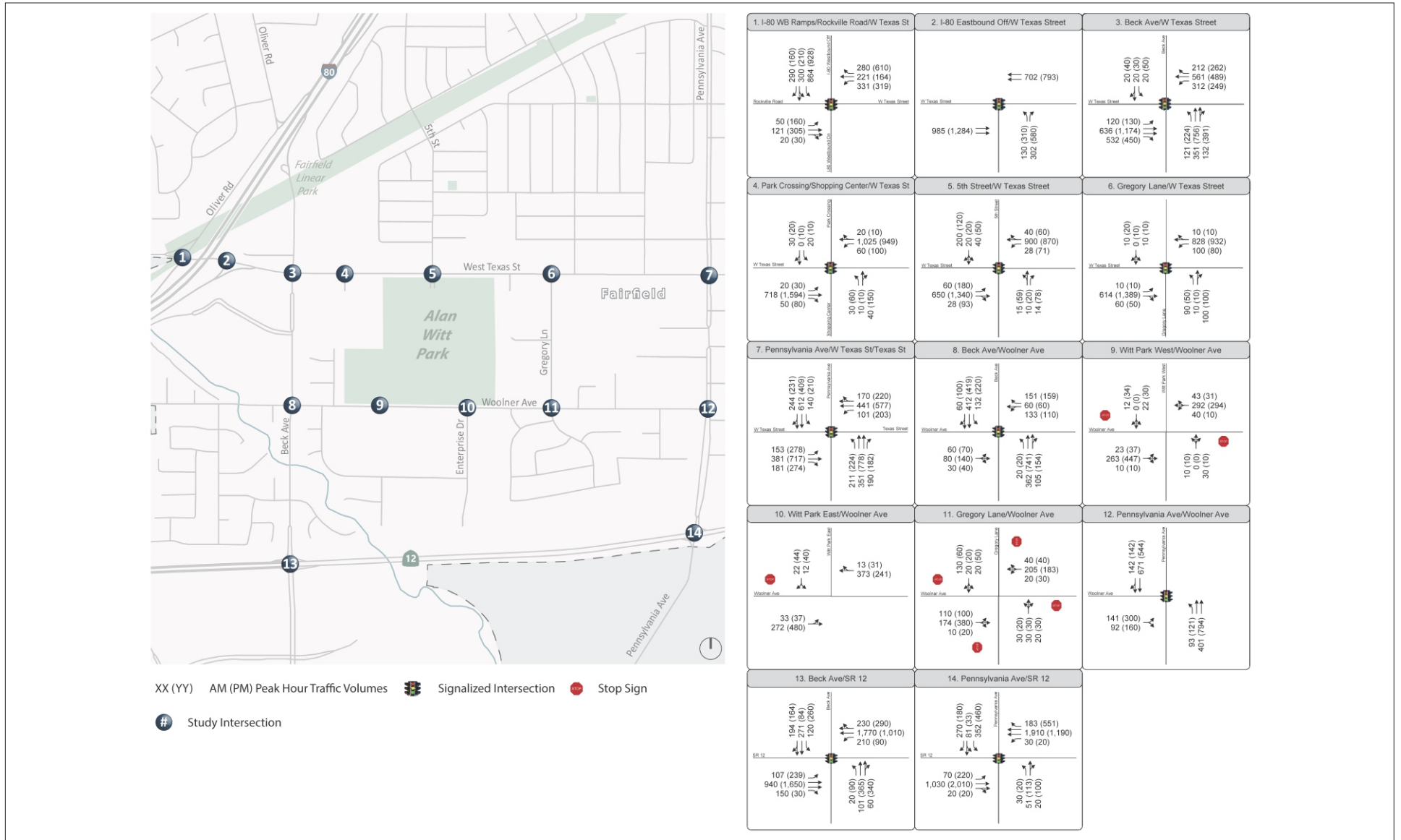
Table 19: Cumulative Intersection Level of Service

	Intersection	Control Type ¹	Peak Hour	Cumulative		Cumulative Plus Project	
				Delay ²	LOS	Delay ²	LOS
1	I-80 WB On/Off Ramps & Rockville Road/W Texas Street	Signal	AM	35.1	D	36.9	D
			PM	38.8	D	36.6	D
2	I-80 EB Off Ramp & W Texas Street	Signal	AM	4.2	A	4.2	A
			PM	3.8	A	3.6	A
3	Beck Ave & W Texas Street	Signal	AM	29.1	C	29.4	C
			PM	44.8	D	47.9	D
4	Shopping Center/Park Crossing & W Texas Street	Signal	AM	7.6	A	7.7	A
			PM	111.4	F	>120.0	F
5	W Texas Street & 5th Street & Allan Witt	Signal	AM	9.9	A	10.2	A
			PM	44.1	D	63.9	E
6	Gregory Lane & W Texas Street	Signal	AM	8.9	A	9.0	A
			PM	17.6	B	21.2	B
7	Pennsylvania Avenue & W Texas Street/Texas Street	Signal	AM	39.3	D	40.0	D
			PM	69.3	E	71.8	E
8	Beck Avenue & Woolner Avenue	Signal	AM	18.8	B	19.1	B
			PM	21.3	C	25.8	C
9	Woolner Avenue & Allan Witt Park West	SSSC	AM	2.7 (26.6)	A (D)	2.9 (27.6)	A (D)
			PM	1.5 (16.5)	A (C)	2.2 (19.0)	A (C)
10	Woolner Avenue & Allan Witt Park East	SSSC	AM	1.0 (14.7)	A (B)	1.1 (15.2)	A (C)
			PM	1.2 (13.9)	A (B)	1.8 (15.3)	A (C)
11	Gregory Lane & Woolner Avenue	AWSC	AM	12.6	B	12.8	B
			PM	15.9	C	17.5	C
12	Pennsylvania Avenue & Woolner Avenue	Signal	AM	9.0	A	9.1	A
			PM	13.0	B	13.9	B
13	Beck Avenue & State Route 12	Signal	AM	34.8	C	35.4	C
			PM	96.5	F	100.0	F
14	Pennsylvania Avenue & State Route 12	Signal	AM	27.9	C	28.1	C
			PM	69.1	E	70.8	E

Source: Fehr & Peers, 2019.

¹ SSSC = Side Street Stop Control, AWSC = All Way Stop Control

² Average Delay per Vehicle in Seconds. For side-street, stop-controlled intersections, delay is presented for intersection average (worst movement).



LSA

FIGURE 13

Allan Witt Community Park Renovation Project
 1741 West Texas Street, Fairfield, Solano County, California
 Cumulative with Project Peak Hour Traffic Volumes,
 Land Configurations and Traffic Controls

Mitigation Measure TRA-2: West Texas Street/5th Street/Allan Witt Park (Intersection 5). The City shall install an exclusive eastbound right turn lane. The installation of an exclusive eastbound right turn lane (into the project site) at this intersection would improve the PM peak hour level of service to E with 41.5 seconds of delay per vehicle in the Cumulative plus Project scenario. With the implementation of this measure, the project's contribution to this significant cumulative impact would be fully mitigated. The implementation of this mitigation measure would require the dedication of right of way from the Allan Witt Community Park site. This improvement could be implemented as part of the West Texas Complete Streets project.

With implementation of Mitigation Measures TRA-1 and TRA-2, the proposed project would not result in significant impacts to the circulation network during the weekday AM or PM peak hour under Existing, EPAP, or Cumulative Conditions. Therefore, with implementation of mitigation, the proposed project would not conflict with any plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system in the near-term or long-term, and this impact would be less than significant.

b. Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (Less Than Significant with Mitigation Incorporated)

The Solano Transportation Authority (STA) has established an LOS standard of LOS E (V:C ratio between 0.88 and 1.0) for all parts of the Congestion Management Program (CMP) network, except those that were already operating at worse levels of service in 1991. As stated in Section 3.16.1.a, the proposed project would not result in significant impacts to the circulation network during the weekday AM or PM peak hour under Existing, or EPAP Conditions. Under Cumulative Conditions, the proposed project would contribute to a significant cumulative impact at two intersections in the project area. With implementation of Mitigation Measures TRA-1 and TRA-2, the project's contribution to these significant cumulative impacts would be fully mitigated. Therefore, implementation of the proposed is not anticipated to result in significant impacts to the regional circulation network.

c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks? (No Impact)

Travis Air Force Base is the closest airport to the project area, and is located more than miles northeast of the project area. The proposed project would not result in a change in air traffic levels or a change in location, which results in substantial safety risks. Therefore, there would be no impact related to this topic and no mitigation is required.

d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Less Than Significant Impact)

The project proposes vehicular site access via the existing signalized intersection at West Texas Street/5th Street/Allan Witt Park Entrance and three unsignalized driveways on Woolner Avenue. The Woolner Avenue driveways would be constructed per City design standards and located in the same, or slightly adjusted, positions. Stop sign control would be provided on the exiting legs of all three Woolner Avenue driveways.

The easternmost driveway would remain at its current location, approximately 200 feet west of the Edwards Way intersection. The other two driveways would be located near the baseball and softball fields in the southwest corner of the site, positioned approximately 300 feet and 630 feet west of the Vine Drive intersection.

Field observed travel speeds along Woolner Avenue in the vicinity of the project site range between 25-35 miles per hour. Speed surveys conducted by the City of Fairfield have identified an 85th percentile speed of 32.4 miles per hour. The posted speed limit is 25 miles per hour. This analysis assumes sight distance requirements for the proposed driveways are based on a design speed of 30 miles per hour. Table 201.1 of the Caltrans Highway Design Manual (HDM) states that the stopping sight distance standard for a design speed of 35 miles per hour is 250 feet. Field observations of existing sight distance at the three conceptually proposed driveway locations indicate sight distances in excess of 250 feet. However, as the project's design is finalized, these distances should be checked, and the project should propose no features (signs, landscaping, etc.) that would compromise driveway sight distance.

The project renovation would expand the current 321 on-site parking stalls with an additional informal gravel lot parking to include 614 parking stalls. The 614 parking stalls would consist of 539 on-site stalls and 75 on street parking stalls along Woolner Avenue. Parking areas would be located in near the current four primary parking areas: at the north entry along West Texas Street, just north of the Sports Center, along the eastern park boundary, and off of Woolner Avenue. Internal access would be provided primarily by a north/south roadway linking the West Texas Street/5th Street/Allan Witt Park Entrance intersection with the Woolner Avenue driveway in the southeastern corner of the project site. This alignment closely follows that of the current north/south connector linking these two locations. A new roadway would branch off of this facility providing access to parking lots in the center of the site near the ball field, connecting to the middle Woolner Avenue driveway. All of the on-site roadways would be two lane facilities, with marked crosswalks at locations where heavy pedestrian movements are anticipated.

As described above, the proposed project would be designed consistent with City standards. Therefore, the proposed project would not substantially increase hazards due to a design feature. This impact would be less than significant and no mitigation is required.

e. Would the project result in inadequate emergency access? (Less Than Significant Impact)

The design, construction, and maintenance of project site access locations and on-site roads would be in compliance with the City's Municipal Code and would be required to meet all emergency access standards. The Fairfield Fire Department (FFD) would also review the proposed site plan and would provide input on final design in relation to emergency access prior to issuance of a building permit. Also, as noted in Section 3.16.1.a, implementation of the proposed project would not result in a significant increase in the amount of traffic volume or delay experienced on the local roadway network. Therefore, the proposed project would have a less than significant impact on emergency access.

f. Would the project conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Less Than Significant Impact)

The following includes a discussion of potential impacts to bicycle, pedestrian, and transit systems within the vicinity of the project site. The proposed project would have a significant impact related to adopted programs, plans, or policies regarding these facilities if it generates pedestrian, bicycle, or transit travel related demand that could not be accommodated by existing facilities, or those proposed by the project.

Pedestrian and Bicycle Facilities. The renovation project proposes to improve and augment the site's pedestrian network of sidewalks and paths, as shown on Figure 3. City standard, or better, pedestrian facilities are provided throughout the site connecting to each amenity. Bicycles are allowed on the site's internal roadways and bicycle racks would be provided as part of planned improvements. However, no changes to the external pedestrian and bicycle networks are proposed by the proposed project.

The proposed project is projecting to increase bicycle and pedestrian use in the area; however, the project proposes no features that would be unsafe for pedestrian or bicycle travel, nor were any instances of over-capacity conditions identified on these facilities. Therefore, the project impacts on bicyclists and pedestrians were found to be less than significant.

Transit Access. The renovation project proposes no changes to the study area's transit facilities.

The proposed project would increase transit use in the area; however, the project proposes no features that would be unsafe for transit vehicles, nor were any instances of over-capacity conditions identified on these facilities. Therefore, the project impacts on transit facilities were found to be less than significant.

3.17 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☐	☐	☒	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

3.17.1 Impact Analysis

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
- i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or*
- ii. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Assembly Bill 52 (AB 52), which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process, and equates significant impacts to “tribal cultural resources” with significant environmental impacts. Public Resources Code (PRC) Section 21074 states that “tribal cultural resources” are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources.
- Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
- 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.

A “historical resource” (PRC Section 21084.1), a “unique archaeological resource” (PRC Section 21083.2(g)), or a “non-unique archaeological resource” (PRC Section 21083.2 (h)) may also be a tribal cultural resource if it is included or determined to be eligible for inclusion in the California Register.

As noted in Section 3.6, Cultural Resources, implementation of Mitigation Measures CULT-1 and CULT-3 would ensure that potential impacts related to previously undiscovered historic or archaeological resources and human remains would be less than significant.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency’s notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency’s notification list. California Native American tribes must be recognized by the California Native American Heritage Commission as traditionally and culturally affiliated with the project site, and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3).

Tribal Outreach and Consultation. The City sent letters describing the project and maps depicting the project site via certified mail on September 11, 2018, to Native American contacts that had previously requested to be contacted by the City for potential consultation pursuant to AB 52. On October 3, 2018, Mr. Leland Kitner, Tribal Historic Preservation Officer of the Yocha Dehe Wintun Nation, responded via letter. The letter indicates that the project is located within the aboriginal territories of the Yocha Dehe Wintun Nation; therefore, the Yocha Dehe Wintun Nation requested the cultural resources study prepared for the proposed project be provided. No additional information or correspondence from the tribe has been received to date.

3.18 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e. 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?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

3.18.1 Impact Analysis

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Less Than Significant Impact)

The Fairfield-Suisun Sewer District (FSSD) and the City provide wastewater treatment service and facilities for the project site. The FSSD's facilities include a Wastewater Treatment Plant (WWTP) with a design capacity of 23.7 million gallons per day (mgd) and an average daily flow of 10 to 15 mgd.⁵³ Therefore, the FSSD WWTP has a minimum available capacity of approximately 8.7 mgd. The FSSD's sewer collection system includes 13 pumping stations and approximately 70 miles of sewer lines. The City owns and operates the smaller wastewater lines in the Downtown area of the City, while the FSSD owns and operates the larger sewer mains. FSSD serves approximately 135,000 residential, commercial, and industrial customers.

Implementation of the proposed project would result in the construction of new park improvements, including new restroom facilities. These facilities would be connected to the existing public service system, including local sewer. The proposed project would result in a minimal increase in wastewater generation compared to existing park operations and would not result in a decrease in the projected available capacity of the WWTP. It is expected that the relatively small amount of

⁵³ Fairfield-Suisun Sewer District, 2016. About Us. Website: <https://www.fssd.com/open-government/> (accessed March 29, 2019).

wastewater generated from park improvements can be accommodated by local sanitary treatment systems and would not exceed the wastewater treatment requirement of the Regional Water Quality Control Board.

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Less Than Significant Impact)

Wastewater. Refer to Section 4.18.1.a for a discussion of wastewater treatment. The proposed project would not have a substantial effect on the WWTP's capacity. Therefore, the proposed project would not require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities.

Water. The City provides water service area to the entire City of Fairfield, excluding the Travis Air Force Base. The City's water service system consists of two treatment plants, 12 reservoirs, and approximately 378 miles of distribution lines. The City treats and delivers an average of 21 million gallons per day, with a rated treatment capacity of 56.7 million gallons per day to accommodate high use periods. Additionally, the City currently has a storage capacity of approximately 78 million gallons.⁵⁴ As noted in Section 3.18.1.d, the City would have sufficient capacity to serve the project site. Development of the proposed project would not substantially increase water demand or wastewater generation at the project site such that new or expanded water or wastewater treatment facilities would be required to serve the proposed project.

The proposed project would connect to existing water delivery systems within the vicinity of the site; existing pipelines are anticipated to have sufficient capacity to support project water flows. Therefore, the proposed project would not require the construction or expansion of new or existing water treatment facilities, and this impact would be less than significant.

c. Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Less Than Significant Impact)

The proposed project would include new connections and upgrades to existing stormwater infrastructure on the project site. Development of the proposed project would increase impervious surfaces on the project site. As such, the proposed project would result in an increase in stormwater runoff. Although the proposed project would result in a net increase in impervious surface coverage compared to the existing condition, the proposed project would include the use of LID features (e.g., detention basins) that would retain and clean stormwater onsite before discharging it into the municipal stormwater system, consistent with Provision C.3 of the MRP. Therefore, the proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, and this impact would be less than significant.

⁵⁴ Fairfield, City of, 2016. *2015 Urban Water Management Plan*. June 7.

d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (Less Than Significant Impact)

The City provides water service to the project site. The primary water sources for the City are the Solano Water Project, the State Water Project, and “settlement water” obtained through negotiations with the Department of Water Resources in 2003. As noted above, the City delivers approximately 21 mgd of water to customers within its service area.

Implementation of the proposed project would result in the construction of park improvements, including restrooms and drinking fountain facilities, as well as landscape and turf areas that would require irrigation. The new restroom and drinking fountain facilities would be connected to existing public service systems, including water and sewer. These connections would not be considered “major” lines because these improvements would be made as additions to the existing infrastructure.

As outlined in the project description, landscaping at the site includes trees, lawn areas and planter beds with large shrubs. Through the phases of the project, the overall lawn area would be reduced to areas with programmed recreation space. Other landscaped areas would be designed for low water use and use climate appropriate plants. As a result, the proposed project is not expected to generate increased water demand compared to existing conditions. Therefore, existing water entitlements would be sufficient to serve the proposed project, and impacts related to water supply would be less than significant.

e. Would the project 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? (Less Than Significant Impact)

Refer to Section 4.18.1.a for a discussion of the proposed project’s impacts to wastewater treatment. The proposed project would result in a minor contribution to the daily permitted capacity of the City’s wastewater treatment plants and would not exceed the plants’ capacity. Therefore, impacts related to the capacity of the existing wastewater treatment plants would be less than significant.

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs? (Less Than Significant Impact)

Republic Services provides residential and commercial solid waste, recycling, and green waste collecting services within the City. Residential and commercial solid waste is taken to the Potrero Hills Landfill. The Potrero Hills Landfill has a maximum daily permitted throughput of 4,330 tons per day and a remaining capacity of approximately 13.87 million cubic yards (CY). Potrero Hills Landfill’s estimated closure date is currently February 2048.⁵⁵ Operation of the proposed project is not

⁵⁵ California Department of Resources Recycling and Recovery, 2018. Solid Waste Information System. Potrero Hills Landfill (48-AA-0075). Website: <https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/> (accessed March 29, 2019).

anticipated to generate a significant amount of solid waste. Users of Allan Witt Community Park and other recreation facilities at the project site would dispose of incremental additional garbage, but not in amounts that would greatly exceed average per capita garbage generation rates. In addition recycling receptacles would be located throughout the park, allowing the proposed project to be in full compliance with waste diversion goals mandated by the California Integrated Waste Management Act. The amount of solid waste generated by both users of the park and construction of park facilities or infrastructure would not substantially decrease the amount of space in the Potrero Hills Landfill. Solid waste disposal off-site would comply with all local, State, and federal requirements. The Potrero Hills Landfill would serve the proposed project and has sufficient permitted capacity to accommodate the project's solid waste disposal needs. This impact would be less than significant.

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste. Also refer to Section 4.18.1.f. Therefore, the proposed project would have a less than significant impact related to solid waste regulations.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.19.1 Impact Analysis

- a. *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Less Than Significant With Mitigation)*

Implementation of the mitigation measures recommended in this Initial Study would ensure that the construction and operation of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory. Section 3.4, *Biological Resources*, includes mitigation measures to minimize impacts to nesting birds and bats that could occur on the project site. Mitigation is provided in Section 3.5, *Cultural Resources*, in the event that unanticipated archeological or paleontological resources and/or human remains are identified in the project area during construction. With implementation of these mitigation measures, the proposed project would result in less than significant impacts to the quality of the environment. No additional mitigation is required.

- b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (Less Than Significant Impact)*

The *CEQA Guidelines* require a discussion of significant environmental impacts that would result from project-related actions in combination with "closely related past, present, and probable future projects: located in the immediate vicinity (CEQA Guidelines Section 15130[b][1][A]). Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the proposed project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the proposed project.

The proposed project would be located in a highly developed urban area that is largely built out. This project is anticipated to start in April 2019. No other construction projects are anticipated in the immediate area of the project within this timeframe. As described in this Initial Study, the majority of environmental impacts associated with the proposed project would be temporary, construction-related and would be reduced to less than significant with implementation of the mitigation measures contained herein. Therefore, the proposed project would not make a considerable contribution toward a cumulative impact related to construction. Additionally, the proposed project would not generate a significant amount of greenhouse gas emissions and would therefore not result in a cumulatively considerable impact to global climate change. Therefore, cumulative impacts would be less than significant, the project's contribution to cumulative impacts would not be cumulatively considerable, and no mitigation is required.

- c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Less Than Significant With Mitigation)*

As described in this IS/MND, any potential environmental impacts from the project would be reduced to less than significant with the implementation of the recommended mitigation measures. With implementation of measures both incorporated into the project design and recommended as mitigations to reduce the impacts associated with air quality, cultural resources, hazards, hydrology, noise, and transportation, the project would not result in substantial adverse effects on human beings.

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4.0 LIST OF PREPARERS

LSA

Prime Consultants: *Project Management and Report Production; Aesthetics; Agricultural Resources; Biological Resources; Cultural Resources; Mineral Resources; Population and Housing; Public Services; Recreation; Tribal Cultural Resources; Utilities and Service Systems*

157 Park Place

Pt. Richmond, CA 94801

Laura Lafler, Principal in Charge

Shanna Guiler, AICP, Associate/Project Manager

Matthew Wiswell, Planner

Andrew Pulcheon, AICP, CEP, Principal, Cultural Resources Manager

Neal Kaptain, Associate, Cultural Resources Manager/Archaeologist

Steve Kohlmann, Associate, Biologist

Patty Linder, Graphics/Document Production

Air Quality; Greenhouse Gas Emissions; and Noise

7086 N. Maple, Suite 104

Fresno, CA 93720

Amy Fischer, Principal, Air Quality and Noise Specialist

Cara Carlucci, Planner

Fehr & Peers

Transportation/Traffic

100 Pringle Avenue, Suite 600

Walnut Creek, CA 94596

Bill Burton, PE, Senior Associate

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APPENDIX A

AIR QUALITY MODELING RESULTS



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Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

Allan Witt Community Park Renovation Project

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	614.00	Space	5.00	245,600.00	0
City Park	43.00	Acre	43.00	1,873,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on 5-year average (2016-2020), PG&E, 2015

Land Use - Allan Witt Community Park total acreage is 48 acres

Construction Phase - Construction on Phase 1 would commence in March 2019 and would extend for approximately six (6) months. Construction schedule for future phases is unknown.

Vehicle Trips - Based on the recreation amenity use matrix to account for the various programmed activities onsite.

Mobile Land Use Mitigation -

Fleet Mix -

Off-road Equipment - Project would include renovations of existing park and would not construct new buildings

Trips and VMT - Project would include renovations of existing park and would not construct new buildings

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	740.00	60.00
tblConstructionPhase	PhaseEndDate	6/21/2019	8/2/2019
tblConstructionPhase	PhaseEndDate	8/5/2022	10/25/2019
tblConstructionPhase	PhaseEndDate	10/21/2022	1/3/2020
tblConstructionPhase	PhaseEndDate	1/6/2023	3/20/2020
tblConstructionPhase	PhaseStartDate	10/5/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	8/6/2022	10/19/2019
tblConstructionPhase	PhaseStartDate	10/22/2022	1/4/2020
tblLandUse	LotAcreage	5.53	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblTripsAndVMT	VendorTripNumber	347.00	10.00
tblTripsAndVMT	WorkerTripNumber	890.00	18.00
tblTripsAndVMT	WorkerTripNumber	178.00	18.00
tblVehicleTrips	ST_TR	22.75	25.30
tblVehicleTrips	SU_TR	16.74	25.30
tblVehicleTrips	WD_TR	1.89	7.65

2.0 Emissions Summary

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3190	3.1250	1.9773	3.4800e-003	0.5585	0.1623	0.7208	0.3024	0.1505	0.4529	0.0000	311.0480	311.0480	0.0841	0.0000	313.1502
2020	0.0620	0.0686	0.0851	1.6000e-004	4.0900e-003	4.2100e-003	8.3000e-003	1.0900e-003	4.1100e-003	5.2000e-003	0.0000	13.6082	13.6082	1.6000e-003	0.0000	13.6483
Maximum	0.3190	3.1250	1.9773	3.4800e-003	0.5585	0.1623	0.7208	0.3024	0.1505	0.4529	0.0000	311.0480	311.0480	0.0841	0.0000	313.1502

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3190	3.1250	1.9773	3.4800e-003	0.5585	0.1623	0.7208	0.3024	0.1505	0.4529	0.0000	311.0476	311.0476	0.0841	0.0000	313.1499
2020	0.0620	0.0686	0.0851	1.6000e-004	4.0900e-003	4.2100e-003	8.3000e-003	1.0900e-003	4.1100e-003	5.2000e-003	0.0000	13.6082	13.6082	1.6000e-003	0.0000	13.6483
Maximum	0.3190	3.1250	1.9773	3.4800e-003	0.5585	0.1623	0.7208	0.3024	0.1505	0.4529	0.0000	311.0476	311.0476	0.0841	0.0000	313.1499

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-4-2019	6-3-2019	1.3854	1.3854
2	6-4-2019	9-3-2019	1.2681	1.2681
3	9-4-2019	12-3-2019	0.5992	0.5992
4	12-4-2019	3-3-2020	0.2709	0.2709
5	3-4-2020	6-3-2020	0.0237	0.0237
		Highest	1.3854	1.3854

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	12.8202	12.8202	1.1300e-003	2.3000e-004	12.9182
Mobile	0.1136	0.5122	1.2458	4.7300e-003	0.4336	3.8700e-003	0.4375	0.1164	3.6100e-003	0.1200	0.0000	434.7841	434.7841	0.0150	0.0000	435.1600
Waste						0.0000	0.0000		0.0000	0.0000	0.7511	0.0000	0.7511	0.0444	0.0000	1.8607
Water						0.0000	0.0000		0.0000	0.0000	0.0000	26.7437	26.7437	2.3600e-003	4.9000e-004	26.9481
Total	0.1527	0.5123	1.2519	4.7300e-003	0.4336	3.8900e-003	0.4375	0.1164	3.6300e-003	0.1200	0.7511	474.3597	475.1108	0.0629	7.2000e-004	476.8995

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	12.8202	12.8202	1.1300e-003	2.3000e-004	12.9182
Mobile	0.1132	0.5099	1.2368	4.6800e-003	0.4293	3.8400e-003	0.4331	0.1152	3.5800e-003	0.1188	0.0000	430.7937	430.7937	0.0149	0.0000	431.1668
Waste						0.0000	0.0000		0.0000	0.0000	0.7511	0.0000	0.7511	0.0444	0.0000	1.8607
Water						0.0000	0.0000		0.0000	0.0000	0.0000	26.7437	26.7437	2.3600e-003	4.9000e-004	26.9481
Total	0.1524	0.5099	1.2429	4.6800e-003	0.4293	3.8600e-003	0.4331	0.1152	3.6000e-003	0.1188	0.7511	470.3693	471.1203	0.0628	7.2000e-004	472.9063

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.25	0.45	0.72	1.06	1.00	0.77	1.00	1.00	0.83	0.99	0.00	0.84	0.84	0.16	0.00	0.84

3.0 Construction Detail**Construction Phase**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/4/2019	5/10/2019	5	50	
2	Site Preparation	Site Preparation	5/11/2019	8/2/2019	5	60	
3	Building Construction	Building Construction	8/3/2019	10/25/2019	5	60	
4	Paving	Paving	10/19/2019	1/3/2020	5	55	
5	Architectural Coating	Architectural Coating	1/4/2020	3/20/2020	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,736 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0878	0.8946	0.5515	9.7000e-004		0.0449	0.0449		0.0417	0.0417	0.0000	86.5658	86.5658	0.0241	0.0000	87.1679
Total	0.0878	0.8946	0.5515	9.7000e-004		0.0449	0.0449		0.0417	0.0417	0.0000	86.5658	86.5658	0.0241	0.0000	87.1679

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	1.0100e-003	0.0103	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6804	2.6804	7.0000e-005	0.0000	2.6822
Total	1.3600e-003	1.0100e-003	0.0103	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6804	2.6804	7.0000e-005	0.0000	2.6822

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.2 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0878	0.8946	0.5515	9.7000e-004		0.0449	0.0449		0.0417	0.0417	0.0000	86.5657	86.5657	0.0241	0.0000	87.1678
Total	0.0878	0.8946	0.5515	9.7000e-004		0.0449	0.0449		0.0417	0.0417	0.0000	86.5657	86.5657	0.0241	0.0000	87.1678

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	1.0100e-003	0.0103	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6804	2.6804	7.0000e-005	0.0000	2.6822
Total	1.3600e-003	1.0100e-003	0.0103	3.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6804	2.6804	7.0000e-005	0.0000	2.6822

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1301	1.3672	0.6619	1.1400e-003		0.0717	0.0717		0.0660	0.0660	0.0000	102.5061	102.5061	0.0324	0.0000	103.3169
Total	0.1301	1.3672	0.6619	1.1400e-003	0.5420	0.0717	0.6137	0.2979	0.0660	0.3639	0.0000	102.5061	102.5061	0.0324	0.0000	103.3169

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624
Total	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.3 Site Preparation - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1301	1.3672	0.6619	1.1400e-003		0.0717	0.0717		0.0660	0.0660	0.0000	102.5059	102.5059	0.0324	0.0000	103.3167
Total	0.1301	1.3672	0.6619	1.1400e-003	0.5420	0.0717	0.6137	0.2979	0.0660	0.3639	0.0000	102.5059	102.5059	0.0324	0.0000	103.3167

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624
Total	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0490	0.4240	0.3224	5.5000e-004		0.0239	0.0239		0.0227	0.0227	0.0000	47.6474	47.6474	9.9400e-003	0.0000	47.8959
Total	0.0490	0.4240	0.3224	5.5000e-004		0.0239	0.0239		0.0227	0.0227	0.0000	47.6474	47.6474	9.9400e-003	0.0000	47.8959

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4200e-003	0.0380	9.7500e-003	8.0000e-005	1.9700e-003	2.6000e-004	2.2300e-003	5.7000e-004	2.5000e-004	8.2000e-004	0.0000	7.9057	7.9057	4.4000e-004	0.0000	7.9167
Worker	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624
Total	3.3800e-003	0.0394	0.0245	1.2000e-004	6.2400e-003	2.9000e-004	6.5300e-003	1.7100e-003	2.8000e-004	1.9800e-003	0.0000	11.7655	11.7655	5.4000e-004	0.0000	11.7790

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.4 Building Construction - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0490	0.4240	0.3224	5.5000e-004		0.0239	0.0239		0.0227	0.0227	0.0000	47.6473	47.6473	9.9400e-003	0.0000	47.8959
Total	0.0490	0.4240	0.3224	5.5000e-004		0.0239	0.0239		0.0227	0.0227	0.0000	47.6473	47.6473	9.9400e-003	0.0000	47.8959

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4200e-003	0.0380	9.7500e-003	8.0000e-005	1.9700e-003	2.6000e-004	2.2300e-003	5.7000e-004	2.5000e-004	8.2000e-004	0.0000	7.9057	7.9057	4.4000e-004	0.0000	7.9167
Worker	1.9600e-003	1.4500e-003	0.0148	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.8598	3.8598	1.0000e-004	0.0000	3.8624
Total	3.3800e-003	0.0394	0.0245	1.2000e-004	6.2400e-003	2.9000e-004	6.5300e-003	1.7100e-003	2.8000e-004	1.9800e-003	0.0000	11.7655	11.7655	5.4000e-004	0.0000	11.7790

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.5 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0378	0.3964	0.3813	5.9000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	53.2355	53.2355	0.0168	0.0000	53.6566
Paving	6.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0440	0.3964	0.3813	5.9000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	53.2355	53.2355	0.0168	0.0000	53.6566

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.0500e-003	0.0107	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.7876	2.7876	7.0000e-005	0.0000	2.7895
Total	1.4100e-003	1.0500e-003	0.0107	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.7876	2.7876	7.0000e-005	0.0000	2.7895

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.5 Paving - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0378	0.3963	0.3813	5.9000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	53.2354	53.2354	0.0168	0.0000	53.6565
Paving	6.1900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0440	0.3963	0.3813	5.9000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	53.2354	53.2354	0.0168	0.0000	53.6565

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.0500e-003	0.0107	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.7876	2.7876	7.0000e-005	0.0000	2.7895
Total	1.4100e-003	1.0500e-003	0.0107	3.0000e-005	3.0800e-003	2.0000e-005	3.1000e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.7876	2.7876	7.0000e-005	0.0000	2.7895

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.5 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	3.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.3900e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.5 Paving - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0300e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285
Paving	3.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.3900e-003	0.0211	0.0220	3.0000e-005		1.1300e-003	1.1300e-003		1.0400e-003	1.0400e-003	0.0000	3.0042	3.0042	9.7000e-004	0.0000	3.0285

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559
Total	7.0000e-005	5.0000e-005	5.5000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1558	0.1558	0.0000	0.0000	0.1559

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.6 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0215	7.0215	5.4000e-004	0.0000	7.0350
Total	0.0579	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0215	7.0215	5.4000e-004	0.0000	7.0350

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.1700e-003	0.0122	4.0000e-005	3.9100e-003	3.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.4268	3.4268	8.0000e-005	0.0000	3.4289
Total	1.6400e-003	1.1700e-003	0.0122	4.0000e-005	3.9100e-003	3.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.4268	3.4268	8.0000e-005	0.0000	3.4289

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

3.6 Architectural Coating - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.6600e-003	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0214	7.0214	5.4000e-004	0.0000	7.0350
Total	0.0579	0.0463	0.0504	8.0000e-005		3.0500e-003	3.0500e-003		3.0500e-003	3.0500e-003	0.0000	7.0214	7.0214	5.4000e-004	0.0000	7.0350

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.1700e-003	0.0122	4.0000e-005	3.9100e-003	3.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.4268	3.4268	8.0000e-005	0.0000	3.4289
Total	1.6400e-003	1.1700e-003	0.0122	4.0000e-005	3.9100e-003	3.0000e-005	3.9400e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.4268	3.4268	8.0000e-005	0.0000	3.4289

4.0 Operational Detail - Mobile

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1132	0.5099	1.2368	4.6800e-003	0.4293	3.8400e-003	0.4331	0.1152	3.5800e-003	0.1188	0.0000	430.7937	430.7937	0.0149	0.0000	431.1668
Unmitigated	0.1136	0.5122	1.2458	4.7300e-003	0.4336	3.8700e-003	0.4375	0.1164	3.6100e-003	0.1200	0.0000	434.7841	434.7841	0.0150	0.0000	435.1600

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	328.99	1,087.99	1087.99	1,165,305	1,153,652
Parking Lot	0.00	0.00	0.00		
Total	328.99	1,087.99	1,087.99	1,165,305	1,153,652

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
Parking Lot	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Mitigated

[illegible]

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	85960	12.8202	1.1300e-003	2.3000e-004	12.9182
Total		12.8202	1.1300e-003	2.3000e-004	12.9182

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	85960	12.8202	1.1300e-003	2.3000e-004	12.9182
Total		12.8202	1.1300e-003	2.3000e-004	12.9182

6.0 Area Detail**6.1 Mitigation Measures Area**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125
Unmitigated	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.6000e-004	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125
Total	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0335					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.6000e-004	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125
Total	0.0392	5.0000e-005	6.0300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0117	0.0117	3.0000e-005	0.0000	0.0125

7.0 Water Detail**7.1 Mitigation Measures Water**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	26.7437	2.3600e-003	4.9000e-004	26.9481
Unmitigated	26.7437	2.3600e-003	4.9000e-004	26.9481

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 51.2337	26.7437	2.3600e-003	4.9000e-004	26.9481
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.7437	2.3600e-003	4.9000e-004	26.9481

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 51.2337	26.7437	2.3600e-003	4.9000e-004	26.9481
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		26.7437	2.3600e-003	4.9000e-004	26.9481

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.7511	0.0444	0.0000	1.8607
Unmitigated	0.7511	0.0444	0.0000	1.8607

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	3.7	0.7511	0.0444	0.0000	1.8607
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.7511	0.0444	0.0000	1.8607

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	3.7	0.7511	0.0444	0.0000	1.8607
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.7511	0.0444	0.0000	1.8607

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

Allan Witt Community Park Renovation Project

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	614.00	Space	5.00	245,600.00	0
City Park	43.00	Acre	43.00	1,873,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on 5-year average (2016-2020), PG&E, 2015

Land Use - Allan Witt Community Park total acreage is 48 acres

Construction Phase - Construction on Phase 1 would commence in March 2019 and would extend for approximately six (6) months. Construction schedule for future phases is unknown.

Vehicle Trips - Based on the recreation amenity use matrix to account for the various programmed activities onsite.

Mobile Land Use Mitigation -

Fleet Mix -

Off-road Equipment - Project would include renovations of existing park and would not construct new buildings

Trips and VMT - Project would include renovations of existing park and would not construct new buildings

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	740.00	60.00
tblConstructionPhase	PhaseEndDate	6/21/2019	8/2/2019
tblConstructionPhase	PhaseEndDate	8/5/2022	10/25/2019
tblConstructionPhase	PhaseEndDate	10/21/2022	1/3/2020
tblConstructionPhase	PhaseEndDate	1/6/2023	3/20/2020
tblConstructionPhase	PhaseStartDate	10/5/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	8/6/2022	10/19/2019
tblConstructionPhase	PhaseStartDate	10/22/2022	1/4/2020
tblLandUse	LotAcreage	5.53	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblTripsAndVMT	VendorTripNumber	347.00	10.00
tblTripsAndVMT	WorkerTripNumber	890.00	18.00
tblTripsAndVMT	WorkerTripNumber	178.00	18.00
tblVehicleTrips	ST_TR	22.75	25.30
tblVehicleTrips	SU_TR	16.74	25.30
tblVehicleTrips	WD_TR	1.89	7.65

2.0 Emissions Summary

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4035	45.6156	26.6995	0.0468	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,580.9465	4,580.9465	1.1957	0.0000	4,608.5053
2020	2.1675	14.0971	15.0545	0.0240	0.1479	0.7536	0.8768	0.0392	0.6933	0.7260	0.0000	2,330.8499	2,330.8499	0.7170	0.0000	2,348.7747
Maximum	4.4035	45.6156	26.6995	0.0468	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,580.9465	4,580.9465	1.1957	0.0000	4,608.5053

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4035	45.6156	26.6995	0.0468	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,580.9465	4,580.9465	1.1957	0.0000	4,608.5053
2020	2.1675	14.0971	15.0545	0.0240	0.1479	0.7536	0.8768	0.0392	0.6933	0.7260	0.0000	2,330.8499	2,330.8499	0.7170	0.0000	2,348.7747
Maximum	4.4035	45.6156	26.6995	0.0468	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,580.9465	4,580.9465	1.1957	0.0000	4,608.5053

[illegible]

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4367	5.4551	14.1554	0.0548	4.9337	0.0423	4.9760	1.3198	0.0395	1.3593		5,548.2166	5,548.2166	0.1821		5,552.7677
Total	1.6544	5.4558	14.2224	0.0548	4.9337	0.0426	4.9762	1.3198	0.0397	1.3595		5,548.3604	5,548.3604	0.1824	0.0000	5,552.9209

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.4324	5.4313	14.0445	0.0543	4.8843	0.0420	4.9263	1.3066	0.0392	1.3457		5,497.2230	5,497.2230	0.1807		5,501.7406
Total	1.6501	5.4319	14.1114	0.0543	4.8843	0.0422	4.9265	1.3066	0.0394	1.3460		5,497.3668	5,497.3668	0.1811	0.0000	5,501.8938

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.26	0.44	0.78	0.91	1.00	0.85	1.00	1.00	0.86	1.00	0.00	0.92	0.92	0.74	0.00	0.92

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/4/2019	5/10/2019	5	50	
2	Site Preparation	Site Preparation	5/11/2019	8/2/2019	5	60	
3	Building Construction	Building Construction	8/3/2019	10/25/2019	5	60	
4	Paving	Paving	10/19/2019	1/3/2020	5	55	
5	Architectural Coating	Architectural Coating	1/4/2020	3/20/2020	5	55	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 5****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,736 (Architectural Coating – sqft)****OffRoad Equipment**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.2 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.899 4	3,816.899 4	1.0618		3,843.445 1
Total	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.899 4	3,816.899 4	1.0618		3,843.445 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.2 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.899 4	3,816.899 4	1.0618		3,843.445 1
Total	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.899 4	3,816.899 4	1.0618		3,843.445 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.3 Site Preparation - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.741 1	1,750.741 1	0.3653		1,759.873 6
Total	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.741 1	1,750.741 1	0.3653		1,759.873 6

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0464	1.2489	0.3050	2.7700e-003	0.0677	8.6400e-003	0.0763	0.0195	8.2700e-003	0.0278		293.5551	293.5551	0.0155		293.9431
Worker	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.1148	1.2918	0.8417	4.3000e-003	0.2156	9.6200e-003	0.2252	0.0587	9.1700e-003	0.0679		446.0903	446.0903	0.0196		446.5797

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.4 Building Construction - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.741 1	1,750.741 1	0.3653		1,759.873 6
Total	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.741 1	1,750.741 1	0.3653		1,759.873 6

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0464	1.2489	0.3050	2.7700e-003	0.0677	8.6400e-003	0.0763	0.0195	8.2700e-003	0.0278		293.5551	293.5551	0.0155		293.9431
Worker	0.0685	0.0429	0.5367	1.5300e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		152.5352	152.5352	4.0600e-003		152.6366
Total	0.1148	1.2918	0.8417	4.3000e-003	0.2156	9.6200e-003	0.2252	0.0587	9.1700e-003	0.0679		446.0903	446.0903	0.0196		446.5797

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.5 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6926	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.5 Paving - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6926	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972
Total	0.0570	0.0357	0.4473	1.2800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		127.1127	127.1127	3.3800e-003		127.1972

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.5 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5947	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.5 Paving - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5947	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.6 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.8628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	2.1049	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

3.6 Architectural Coating - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.8628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.1049	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288
Total	0.0626	0.0379	0.4830	1.4800e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		147.7398	147.7398	3.5600e-003		147.8288

4.0 Operational Detail - Mobile

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4324	5.4313	14.0445	0.0543	4.8843	0.0420	4.9263	1.3066	0.0392	1.3457		5,497.2230	5,497.2230	0.1807		5,501.7406
Unmitigated	1.4367	5.4551	14.1554	0.0548	4.9337	0.0423	4.9760	1.3198	0.0395	1.3593		5,548.2166	5,548.2166	0.1821		5,552.7677

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	328.99	1,087.99	1087.99	1,165,305	1,153,652
Parking Lot	0.00	0.00	0.00		
Total	328.99	1,087.99	1,087.99	1,165,305	1,153,652

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
Parking Lot	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Unmitigated	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1835					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1800e-003	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Total	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1835					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1800e-003	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Total	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

Allan Witt Community Park Renovation Project

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	614.00	Space	5.00	245,600.00	0
City Park	43.00	Acre	43.00	1,873,080.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	328.8	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity based on 5-year average (2016-2020), PG&E, 2015

Land Use - Allan Witt Community Park total acreage is 48 acres

Construction Phase - Construction on Phase 1 would commence in March 2019 and would extend for approximately six (6) months. Construction schedule for future phases is unknown.

Vehicle Trips - Based on the recreation amenity use matrix to account for the various programmed activities onsite.

Mobile Land Use Mitigation -

Fleet Mix -

Off-road Equipment - Project would include renovations of existing park and would not construct new buildings

Trips and VMT - Project would include renovations of existing park and would not construct new buildings

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	60.00
tblConstructionPhase	NumDays	740.00	60.00
tblConstructionPhase	PhaseEndDate	6/21/2019	8/2/2019
tblConstructionPhase	PhaseEndDate	8/5/2022	10/25/2019
tblConstructionPhase	PhaseEndDate	10/21/2022	1/3/2020
tblConstructionPhase	PhaseEndDate	1/6/2023	3/20/2020
tblConstructionPhase	PhaseStartDate	10/5/2019	8/3/2019
tblConstructionPhase	PhaseStartDate	8/6/2022	10/19/2019
tblConstructionPhase	PhaseStartDate	10/22/2022	1/4/2020
tblLandUse	LotAcreage	5.53	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	328.8
tblTripsAndVMT	VendorTripNumber	347.00	10.00
tblTripsAndVMT	WorkerTripNumber	890.00	18.00
tblTripsAndVMT	WorkerTripNumber	178.00	18.00
tblVehicleTrips	ST_TR	22.75	25.30
tblVehicleTrips	SU_TR	16.74	25.30
tblVehicleTrips	WD_TR	1.89	7.65

2.0 Emissions Summary

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4074	45.6257	26.6878	0.0465	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,551.604 1	4,551.604 1	1.1955	0.0000	4,579.184 2
2020	2.1711	14.1046	15.0301	0.0239	0.1479	0.7536	0.8768	0.0392	0.6933	0.7260	0.0000	2,321.143 3	2,321.143 3	0.7168	0.0000	2,339.063 2
Maximum	4.4074	45.6257	26.6878	0.0465	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,551.604 1	4,551.604 1	1.1955	0.0000	4,579.184 2

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.4074	45.6257	26.6878	0.0465	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,551.604 1	4,551.604 1	1.1955	0.0000	4,579.184 2
2020	2.1711	14.1046	15.0301	0.0239	0.1479	0.7536	0.8768	0.0392	0.6933	0.7260	0.0000	2,321.143 3	2,321.143 3	0.7168	0.0000	2,339.063 2
Maximum	4.4074	45.6257	26.6878	0.0465	18.2141	2.3913	20.6055	9.9699	2.2000	12.1699	0.0000	4,551.604 1	4,551.604 1	1.1955	0.0000	4,579.184 2

[illegible]

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2294	5.7045	14.2959	0.0513	4.9337	0.0425	4.9762	1.3198	0.0397	1.3595		5,197.6830	5,197.6830	0.1862		5,202.3390
Total	1.4472	5.7051	14.3629	0.0513	4.9337	0.0428	4.9764	1.3198	0.0399	1.3597		5,197.8268	5,197.8268	0.1866	0.0000	5,202.4922

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2252	5.6779	14.1971	0.0508	4.8843	0.0422	4.9265	1.3066	0.0394	1.3459		5,149.7927	5,149.7927	0.1850		5,154.4165
Total	1.4429	5.6786	14.2641	0.0508	4.8843	0.0424	4.9267	1.3066	0.0396	1.3462		5,149.9365	5,149.9365	0.1853	0.0000	5,154.5696

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.29	0.47	0.69	0.94	1.00	0.86	1.00	1.00	0.85	1.00	0.00	0.92	0.92	0.69	0.00	0.92

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/4/2019	5/10/2019	5	50	
2	Site Preparation	Site Preparation	5/11/2019	8/2/2019	5	60	
3	Building Construction	Building Construction	8/3/2019	10/25/2019	5	60	
4	Paving	Paving	10/19/2019	1/3/2020	5	55	
5	Architectural Coating	Architectural Coating	1/4/2020	3/20/2020	5	55	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 5****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,736 (Architectural Coating – sqft)****OffRoad Equipment**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.2 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.899 4	3,816.899 4	1.0618		3,843.445 1
Total	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.899 4	3,816.899 4	1.0618		3,843.445 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.2 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.899 4	3,816.899 4	1.0618		3,843.445 1
Total	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.899 4	3,816.899 4	1.0618		3,843.445 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.3 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.3 Site Preparation - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.4 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.741 1	1,750.741 1	0.3653		1,759.873 6
Total	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.741 1	1,750.741 1	0.3653		1,759.873 6

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0486	1.2658	0.3481	2.7100e-003	0.0677	8.7800e-003	0.0765	0.0195	8.4000e-003	0.0279		286.2520	286.2520	0.0168		286.6723
Worker	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.1210	1.3188	0.8549	4.1200e-003	0.2156	9.7600e-003	0.2253	0.0587	9.3000e-003	0.0680		426.7658	426.7658	0.0206		427.2815

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.4 Building Construction - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.741 1	1,750.741 1	0.3653		1,759.873 6
Total	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.741 1	1,750.741 1	0.3653		1,759.873 6

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0486	1.2658	0.3481	2.7100e-003	0.0677	8.7800e-003	0.0765	0.0195	8.4000e-003	0.0279		286.2520	286.2520	0.0168		286.6723
Worker	0.0724	0.0530	0.5068	1.4100e-003	0.1479	9.8000e-004	0.1488	0.0392	9.0000e-004	0.0401		140.5138	140.5138	3.8200e-003		140.6092
Total	0.1210	1.3188	0.8549	4.1200e-003	0.2156	9.7600e-003	0.2253	0.0587	9.3000e-003	0.0680		426.7658	426.7658	0.0206		427.2815

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.5 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6926	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.5 Paving - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6926	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743
Total	0.0603	0.0442	0.4223	1.1800e-003	0.1232	8.2000e-004	0.1240	0.0327	7.5000e-004	0.0334		117.0948	117.0948	3.1800e-003		117.1743

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.5 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5947	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.733 4	2,207.733 4	0.7140		2,225.584 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.5 Paving - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1
Paving	0.2382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5947	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.733 4	2,207.733 4	0.7140		2,225.584 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.6 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.8628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	2.1049	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

3.6 Architectural Coating - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.8628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	2.1049	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750
Total	0.0662	0.0468	0.4536	1.3700e-003	0.1479	9.6000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.0918	136.0918	3.3300e-003		136.1750

4.0 Operational Detail - Mobile

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2252	5.6779	14.1971	0.0508	4.8843	0.0422	4.9265	1.3066	0.0394	1.3459		5,149.7927	5,149.7927	0.1850		5,154.4165
Unmitigated	1.2294	5.7045	14.2959	0.0513	4.9337	0.0425	4.9762	1.3198	0.0397	1.3595		5,197.6830	5,197.6830	0.1862		5,202.3390

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	328.99	1,087.99	1087.99	1,165,305	1,153,652
Parking Lot	0.00	0.00	0.00		
Total	328.99	1,087.99	1,087.99	1,165,305	1,153,652

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732
Parking Lot	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Unmitigated	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1835					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1800e-003	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Total	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0281					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1835					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.1800e-003	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532
Total	0.2177	6.1000e-004	0.0670	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1438	0.1438	3.8000e-004		0.1532

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Allan Witt Community Park Renovation Project - Bay Area AQMD Air District, Winter

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B

NOISE MODELING RESULTS



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Noise Measurement Survey

Project Number: CAL1801

Test Personnel: Chet Monh

Project Name: Alan Witt Park

Equipment: LD SoundTrack LXT0004025

Site Number: 01 Date: December 18, 2018 Time: From 11:45am To 12:00pm

Site Location: Northeast area of park

Primary Noise Sources: Traffic on Lincoln Highway/West Texas Street

Comments: Commercial/passenger aircraft overflight seven minutes into measurement

Adjacent Roadways: Lincoln Highway/West Texas Street

File:	CAL1801_STNLM_S01.xlsx
L _{eq}	55.5
L _{max}	67.8
L _{min}	46.9
L ₅	59.0
L ₁₀	57.6
L ₃₃	55.4
L ₅₀	54.4
L ₆₀	53.3
L ₉₀	50.3

Atmospheric Conditions	
Average Wind Velocity (mph)	1.5
Maximum Wind Velocity (mph)	3.5
Temperature (F)	57.4
Relative Humidity (%)	82

Noise Measurement Survey

Project Number: CAL1801
Project Name: Alan Witt Park

Test Personnel: Chet Monh
Equipment: LD SoundTrack LXT0004025

Site Number: 02 Date: December 18, 2018 Time: From 12:14Pm To 12:29pm

Site Location: Southeast area of park

Primary Noise Sources: Traffic on Woolner Avenue

Comments: Commercial/passenger aircraft overflight seven minutes into measurement

Adjacent Roadways: Woolner Avenue

File:	CAL1801_STNLM_S02.xlsx
L _{eq}	57.8
L _{max}	72.4
L _{min}	43.1
L ₅	62.5
L ₁₀	61.4
L ₃₃	58.2
L ₅₀	55.7
L ₆₀	51.8
L ₉₀	47.4

Atmospheric Conditions	
Average Wind Velocity (mph)	1.2
Maximum Wind Velocity (mph)	3.0
Temperature (F)	59.4
Relative Humidity (%)	77

Noise Measurement Survey

Project Number: CAL1801
Project Name: Alan Witt Park

Test Personnel: Chet Monh
Equipment: LD SoundTrack LXT0004025

Site Number: 03 Date: December 18, 2018 Time: From 12:41Pm To 12:56pm

Site Location: West area of park

Primary Noise Sources: Traffic on Woolner Avenue

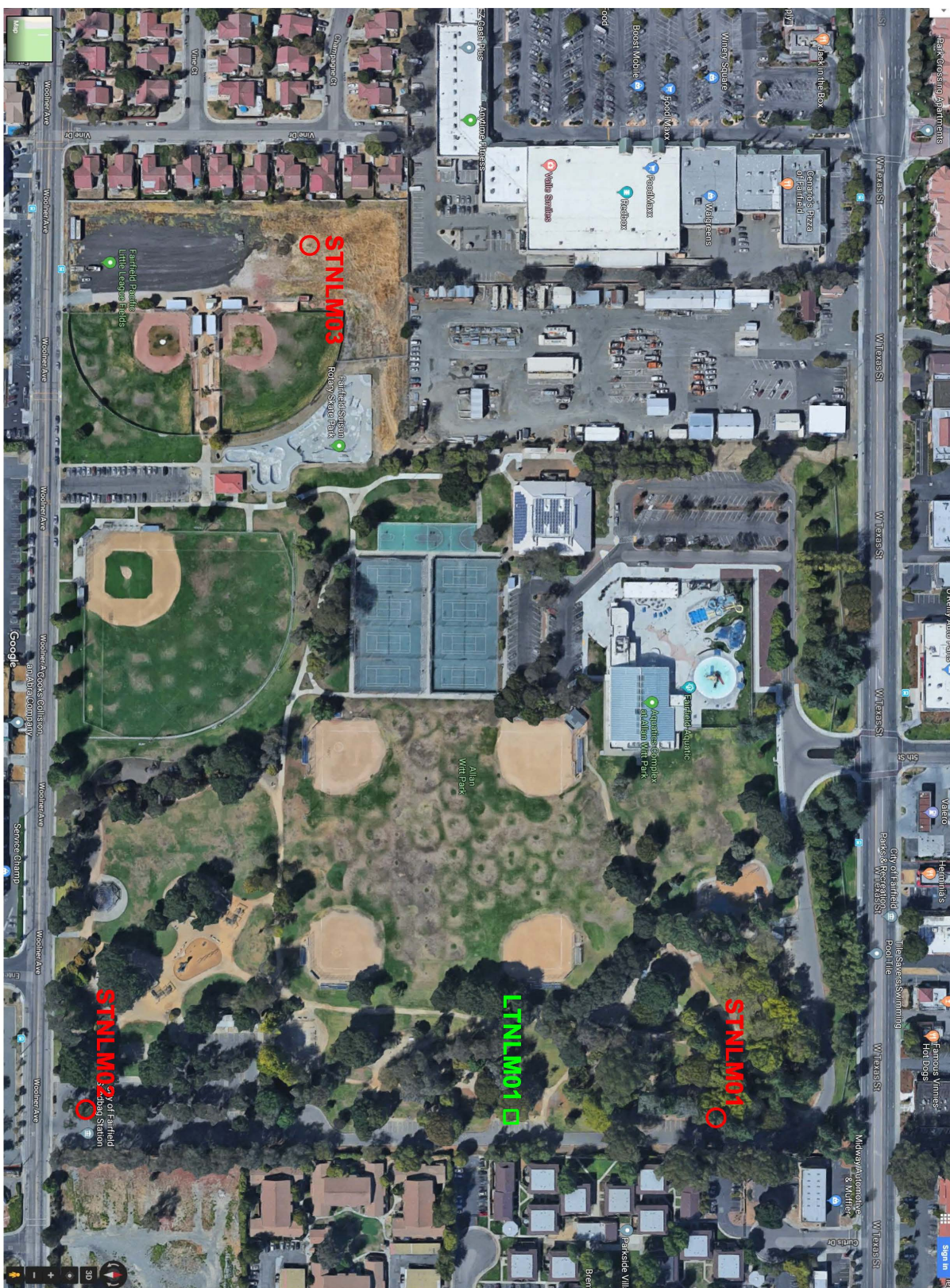
Comments: Commercial/passenger aircraft overflight seven minutes into measurement

Adjacent Roadways: Woolner Avenue

File:	CAL1801_STNLM_S03.xlsx
L _{eq}	46.2
L _{max}	79.0
L _{min}	41.3
L ₅	49.4
L ₁₀	48.5
L ₃₃	46.3
L ₅₀	45.4
L ₆₀	44.6
L ₉₀	43.3

Atmospheric Conditions	
Average Wind Velocity (mph)	0.9
Maximum Wind Velocity (mph)	2.8
Temperature (F)	64.0
Relative Humidity (%)	60

Location Photo:

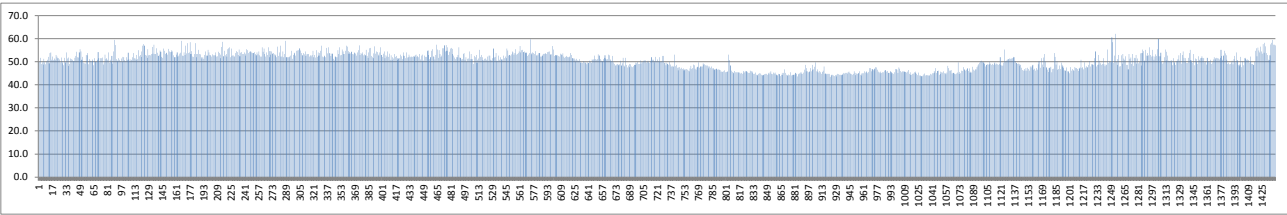
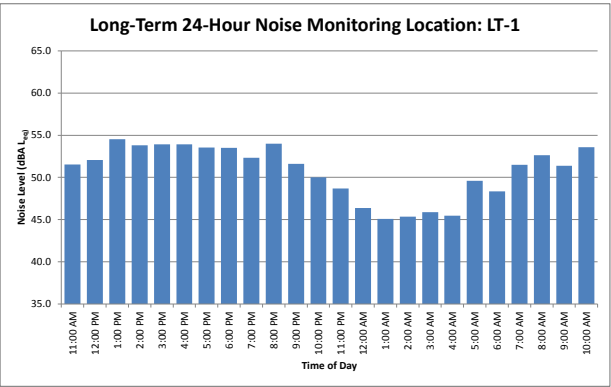


8-29-18				
Hourly Leq	Edit	Hourly Leq	Weight	
51.5		11: 11:00 AM	51.5	0.0
		12: 12:00 PM	52.1	0.0
		13: 1:00 PM	54.5	0.0
		14: 2:00 PM	53.8	0.0
		15: 3:00 PM	53.9	0.0
		16: 4:00 PM	53.9	0.0
		17: 5:00 PM	53.5	0.0
		18: 6:00 PM	53.5	0.0
		19: 7:00 PM	52.3	0.0
		20: 8:00 PM	54.0	5.0
		21: 9:00 PM	51.6	5.0
		22: 10:00 PM	50.0	5.0
		23: 11:00 PM	48.7	10.0
		0: 12:00 AM	46.4	10.0
		1: 1:00 AM	45.1	10.0
		2: 2:00 AM	45.3	10.0
		3: 3:00 AM	45.9	10.0
		4: 4:00 AM	45.5	10.0
		5: 5:00 AM	49.6	10.0
		6: 6:00 AM	48.4	10.0
		7: 7:00 AM	51.5	10.0
		8: 8:00 AM	52.6	0.0
		9: 9:00 AM	51.4	0.0
		10: 10:00 AM	53.6	0.0

CNEL 56.0
Peak Leq 54.5

Daytime
Min 51.4
Max 54.5
Evening
Min 50.0
Max 54.0
Night
Min 45.1
Max 51.5

45.1
MAX 62.1
MIN 43.3



Long-Term 24-Hour Noise Monitoring Location: LT-1