

APPENDIX A

Notice of Preparation and NOP Comments

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please contact the Planning Department at (559) 621-8277



NOTICE OF PREPARATION

FOR THE

SPECIFIC PLAN OF THE WEST AREA

JULY 2019

Prepared for:



Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
(559) 621-2485

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818



D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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Prepared for:



Development and Resources Management Department
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NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

DATE: July 2, 2019

To: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

SUBJECT: Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the Specific Plan of the West Area

LEAD AGENCY: City of Fresno, Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
(559) 621-2485

PROJECT PLANNER: Rodney Horton
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(559) 621-8181

PURPOSE OF NOTICE

This is to notify public agencies and the general public that the City of Fresno, as the Lead Agency, will prepare an Environmental Impact Report (EIR) for the Specific Plan of the West Area. The City of Fresno is interested in the input and/or comments of public agencies and the public as to the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project, and public input. Responsible/trustee agencies will need to use the EIR prepared by the City of Fresno when considering applicable permits, or other approvals for the proposed project.

COMMENT PERIOD

Consistent with the time limits mandated by State law, your input, comments or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 PM, August 2, 2019.

Please send your comments/input (including the name for a contact person in your agency) to: Attn: Rodney Horton at the City of Fresno, 2600 Fresno Street, Room 3065, Fresno, CA 93721; or by e-mail to rodney.horton@fresno.gov.

SCOPING MEETING

On July 24, 2019, the City of Fresno will conduct a public scoping meeting to solicit input and comments from public agencies and the general public on the proposed project and scope of the EIR. This meeting will be held at the Glacier Point Middle School, Cafeteria, located at 4055 N. Bryan Avenue, Fresno, CA 93722, from 6:00 PM to 7:30 PM.

This meeting will be an open house format and interested parties may drop in to review the proposed project exhibits and submit written comments at any time between 6:00 PM and 7:30 PM. Representatives from the City of Fresno and the EIR consultant will be available to address questions regarding the EIR process and scope. Members of the public may provide written comments throughout the meeting.

If you have any questions regarding the scoping meeting, contact Rodney Horton, Project Planner, at (559) 621-8181 or rodney.horton@fresno.gov.

PROJECT LOCATION

The Specific Plan of the West Area (also-known-as “Specific Plan” or “West Area”) encompasses approximately 7,077 acres (or a little more than 11 square miles) in the City of Fresno city limits and unincorporated Fresno County. The footprint of the Specific Plan is referred to as the “Plan Area.” Of the eleven square miles within the Plan Area, 6.9 square miles are in the city limits and 4.1 square miles are in the growth area. The growth area is land outside the city limits but within the City’s Sphere of Influence (SOI) boundary, which is the adopted limit for future growth.

The Plan Area is triangular in shape and located west of State Route 99. It is bounded on the south by West Clinton Avenue, and to the west by Grantland and Garfield Avenues. The Plan Area includes the southwest portion of Highway City adjacent to State Route 99. See Figure 1 for the regional location map and Figure 2 for the Plan Area vicinity map.

PROJECT SETTING

EXISTING SITE CONDITIONS

The Plan Area is relatively flat with natural gentle slope near State Route 99. The Plan Area topography ranges in elevation from approximately 283 to 315 feet above mean sea level. A significant amount of land in the Plan Area is farmland or rural residential lots with large, uneven, and underutilized parcels. The West Area has approximately 3,070.95 acres of land that is classified as Urban and Built-Up, according to the State Department of Conservation. Prime farmland is principally located outside of the Plan Area. The West Area has 285.65 acres of Farmland of Statewide Importance which is located primarily in the western edge of the Plan Area. Approximately 509.39 acres of Unique Farmland is located within the Plan Area, most of which is within the southwest portion of the Plan Area. Farmland of Local Importance is located throughout the entire Plan Area, and totals approximately 1,562.82 acres. Vacant or Disturbed Land and Rural Residential Land account for approximately 1,650.17 acres within the growth area. See Figure 3 for an aerial view of the Plan Area.

SURROUNDING LAND USES

Surrounding land uses include State Route 99, the unincorporated communities of Herndon, Highway City, and Muscatel, and incorporated areas of the City of Fresno to the north (including mostly industrial uses), incorporated areas of the City of Fresno to the east (also including mostly industrial uses), unincorporated Fresno County and incorporated areas of the City of Fresno to the south (including farmland uses, rural residential uses, low density residential uses, and underutilized parcels) and unincorporated Fresno County to the west (including farmland and rural residential uses).

EXISTING LAND USES AND ZONING

A portion of the Plan Area is located within the City of Fresno city limits, and a portion is within unincorporated Fresno County (but within the City's SOI). The City of Fresno General Plan designates the Plan Area as: Low Density Residential, Medium Low Density Residential, Medium Density Residential, Urban Neighborhood Residential, High Density Residential, Community Commercial, General Commercial, Recreation Commercial, Office, Business Park, Light Industrial, Corridor/Center Mixed Use, Regional Mixed Use, Community Park, Open Space – Ponding Basin, Neighborhood Park, Open Space, Public/Quasi-Public Facility, Special School, Elementary School, Elementary, Middle & High School, and High School. See Figure 4 for the existing City General Plan land use designations.

The City of Fresno Zoning Map provides zoning for those portions of the Plan Area located within the city limits, but not for areas within the unincorporated County. Zoning designations are generally consistent with the existing General Plan land uses. The City zoning designations for the Plan Area include: Residential Estate (RE), Residential Single-Family, Extremely Low Density (RS-1), Residential Single-Family, Very Low Density (RS-2), Residential Single-Family, Low Density (RS-3), Residential Single-Family, Medium Low Density (RS-4), Residential Single-Family, Medium Density (RS-5), Residential Multi-Family, Medium High Density (RM-1), Residential Multi-Family, Urban Neighborhood (RM-2), Residential Multi-Family, High Density (RM-3), Mobile Home Park (RM-MH), Commercial Community (CC), Commercial General (CG), Commercial Regional (CR), Commercial Recreation (CRC), Light Industrial (IL), Corridor/Center Mixed Use (CMX), Neighborhood Mixed Use (NMX), Regional Mixed Use (RMX), Business Park (BP), Office (O), Open Space (OS), and Park and Recreation (PR). See Figure 5 for the existing zoning designations.

The Fresno County Zoning Map designates the portions of the Plan Area outside the city limits as: Rural Commercial Center (RCC), Central Trading (C4), General Commercial (C6), Light Industrial (M1), Exclusive Agricultural (AE20), Limited Agricultural (AL20), Rural Residential (RR), Single Family Residential Agricultural (RA), Single Family Residential (12,500) (R1B), and Trailer Park Residential (TP). Upon a proposal to annex unincorporated land into the city limits, the City of Fresno would prezone the land to a zone that is consistent with the General Plan land use. Once annexation occurs, the County zoning would not apply to the parcel.

PROJECT GOALS AND OBJECTIVES

Consistent with the California Environmental Quality Act (CEQA), Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed project shall be discussed. The objectives of the proposed project include future development of land for a wide variety of land uses including: Low Density Residential, Medium Low Density Residential, Medium Density Residential, Medium High Density Residential, Urban Neighborhood Residential, High Density Residential, Community Commercial, Recreation Commercial, General Commercial, Regional Commercial, Office, Business Park, Light Industrial, Corridor/Center Mixed Use, Regional Mixed Use, Pocket Park, Neighborhood Park, Community Park, Open Space, Ponding Basin, Public Facility, Church, Special School, Elementary School, Elementary, Middle & High School, High School, and Fire Station uses, as well as the required transportation and utility improvements.

Other objectives and purposes of the Specific Plan are summarized as follows:

- Accommodate and improve roadway access, connectivity and mobility among all modes of transportation, and prioritize roadway widening where bottlenecking exists.
- Accommodate planned transit services in the West Area by locating routes near or adjacent to the community centers, schools, parks, and retail centers.
- Provide a complete, safe, and well-maintained sidewalk network from residential neighborhoods to commercial centers, schools, parks, and community centers.
- Provide a complete, safe, and well-maintained roadway network that allows for efficient and smooth access from the West Area to other sections of the City and region.
- Create parks that are within existing and planned neighborhoods that are easily accessed by community members using pedestrian and bicycle pathways, transit services, or motor vehicles, consistent with the City of Fresno's Parks Master Plan.
- Provide for the location of a flagship Regional Park in the Plan Area that has components of the Plan Area's agricultural history through the planting of drought-resistant vegetation or trees, and the creation of public art that exhibits the Plan Area's contribution to the agricultural industry.
- Incorporate elements of agriculture in future parks by planting a mixture of native drought tolerant vegetation, shrubs, and trees that can serve to provide shade and enhance the streetscape.
- Encourage and provide land use opportunities for agri-tourism ventures to occur in the West Area.
- Encourage the development of harvest – producing community gardens.
- Attract desired and needed local retail establishments to serve the needs of the West Area community. Such establishments include grocery stores, bakeries, restaurants other than fast food places, and boutiques.
- Discourage the expansion of undesirable retail establishments such as liquor stores, tobacco and vapor stores, short-term loan and pawn shops, and adult stores.
- Encourage the development of retail establishments along commercial corridors.

- Encourage the orderly and consistent development of civic, parkland, retail and commercial, mixed-use, and multi-family uses along West Shaw Avenue, West Ashlan Avenue, Veterans Boulevard, West Shields Avenue, West Clinton Avenue, and Blythe Avenue.
- Encourage a variety of housing types and styles.
- Encourage the development of housing to accommodate an aging population including, multi-generational houses and other elder housing options.
- Reaffirm the City's commitment and obligation to affirmatively further access to fair and affordable housing opportunities by strongly encouraging equitable and fair housing opportunities to be located in strategic proximity to employment, recreational facilities, schools, neighborhood commercial areas, and transportation routes.
- Attract much needed educational opportunities for the residents of the West Area, especially for post-secondary education, and access to programs for life-long learners.
- Provide for safe routes to schools for children, with the City and County working together with residents, to provide sidewalks in neighborhood that have sporadic access.
- Work to promote Neighborhood Watch in all neighborhoods, and further assess the need for the location of emergency response facilities west of State Route 99.

PROJECT CHARACTERISTICS AND DESCRIPTION

BACKGROUND

The proposed Specific Plan process officially started in September 2017 with the drafting of the existing conditions report. That document provides a detailed overview of the existing land uses within the Plan Area. Outreach to the West Area community started in early 2018 with individual meetings between City staff and community stakeholders, including residents, local agencies, institutional partners, elected officials, land owners, and developers. Public outreach included community stakeholder interviews, Steering Committee orientation sessions and meetings, community meetings and workshops, and an on-line survey.

The 11-member Steering Committee, established in March 2018 by the Fresno City Council, held regular public meetings to provide recommendations to the draft land use map and guiding principles based on input received from community members. Additionally, approximately 25 community stakeholders were interviewed from January 2018 to April 2018. Next, a kick-off survey regarding the Plan Area was released in April 2018. The survey covered topics such as quality of life, needed improvements, needed housing and commercial development, agri-tourism, and the overall future vision for the Plan Area. Two community conversations (i.e., workshops) were also held in order to receive feedback: Community Conversation No. 1 was held in May 2018, and Community Conversation No. 2 was held in June 2018. The Steering Committee then held meetings in June, July, August, November, and January 2018 in order to review and select the conceptual land use options. The draft land use map and guiding principles were released to the public on November 28, 2018. The draft land use map was then amended by the Steering Committee in January 2019. Lastly, an agri-tourism workshop was held in the spring of 2019.

INTRODUCTION

The proposed Specific Plan will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 7,077-acre Plan Area. The Specific Plan will serve as a bridge between the Fresno General Plan and individual development applications in the Plan Area.

The Specific Plan of the West Area seeks to provide for the orderly and consistent development that promotes and establishes the West Area as a complete neighborhood with enhanced transportation infrastructure, development of core commercial centers, creation of additional parkland, and encouraging the development of a diverse housing stock. The Plan Area does not currently have needed commercial amenities, forcing residents to travel east of State Route 99 for retail services. The Plan Area also lacks a complete roadway network and parkland.

LAND USE MAP AND MAXIMUM BUILDOUT POTENTIAL

The proposed Specific Plan refines the General Plan's land use vision for the West Area. The draft land use map proposes the relocation of higher density land uses away from the most western and southwestern portions of the Plan Area where they are distant from public transit and community amenities and transfers those higher density land use designations to major corridors. The Specific Plan of the West Area land use plan utilizes the City's existing General Plan land use designations to maintain or re-designate some parcels in the West Area. Some of the designation changes include: Low Density Residential (1 to 3.5 dwelling units per acre [DU/AC]), Medium Low Density Residential (3.5 to 6 DU/AC), Medium Density Residential (5 to 12 DU/AC), Medium High Density Residential (12 to 16 DU/AC), Urban Neighborhood Residential (16 to 30 DU/AC), High Density Residential (30 to 45 DU/AC), Community Commercial (1.0 maximum floor-area-ratio [FAR]), Recreation Commercial (0.5 maximum FAR), General Commercial (2.0 maximum FAR), Regional Commercial (1.0 maximum FAR), Office (2.0 maximum FAR), Business Park (1.0 maximum FAR), Light Industrial (1.0 maximum FAR), Corridor/Center Mixed Use (16 to 30 UD/AC and 1.5 maximum FAR), Regional Mixed Use (30 to 45 UD/AC and 2.0 maximum FAR), Pocket Park, Neighborhood Park, Community Park, Open Space, Ponding Basin, Public Facility, Church, Special School, Elementary School, Elementary, Middle & High School, High School, and Fire Station. See Table 1 for a summary of the existing and proposed land uses within the city limits, growth area, and Plan Area. See Figure 6 for the proposed General Plan land use designations.

As previously indicated, the City of Fresno Zoning Map designates the Plan Area as: RE, RS-1, RS-2, RS-3, RS-4, RS-5, RM-1, RM-2, RM-3, RM-MH, CC, CG, CR, CRC, IL, CMX, NMX, RMX, BP, O, OS, and PR. The Fresno County Zoning Map designates the portions of the Plan Area outside the city limits as: RCC, C4, C6, M1, AE20, AL20, RR, RA, R1B, and TP. In conjunction with the approval of the Specific Plan, the parcels in the City which would have a changed land use designation as a result of the Specific Plan would be rezoned to the corresponding City zoning designation.

TABLE 1: PARCEL ACREAGES BY LAND USE CLASSIFICATION FOR GENERAL PLAN AND PROPOSED SPECIFIC PLAN

GENERAL PLAN LAND USE DESIGNATIONS	CITY LIMITS			GROWTH AREA			PLAN AREA TOTAL		
	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	DIFFERENCE IN CITY	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	DIFFERENCE IN GROWTH AREA	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	OVERALL CHANGE
Low	146.20	95.82	- 163.47	671.59	420.76	- 143.64	817.79	516.57	- 307.11
Medium Low	582.37	821.03		243.59	635.94		825.97	1,456.98	
Medium	1,460.88	1,240.70		896.13	824.67		2,357.00	2,065.37	
Medium High	261.09	224.31		88.33	51.24		349.42	275.55	
Urban Neighborhood	214.65	96.53		213.96	75.11		428.61	171.64	
High	28.00	51.33		37.76	0.00		65.76	51.33	
<i>Subtotal - Residential</i>	<i>2,693.19</i>	<i>2,529.72</i>		<i>2,151.36</i>	<i>2,007.72</i>		<i>4,844.55</i>	<i>4,537.44</i>	
Community	81.87	27.40	- 40.68	56.79	25.34	+ 36.56	138.66	52.74	- 4.11
Recreation	41.34	41.34		0.00	0.00		41.34	41.34	
General	141.59	155.38		1.63	65.40		143.21	220.78	
Regional	0.00	0.00		0.00	4.24		0.00	4.24	
<i>Subtotal - Commercial</i>	<i>264.80</i>	<i>224.12</i>		<i>58.42</i>	<i>94.98</i>		<i>323.21</i>	<i>319.10</i>	
Office	7.51	42.94	+ 32.91	0.00	45.87	+ 26.92	7.51	88.81	+ 59.84
Business Park	22.71	20.57		54.40	35.45		77.11	56.02	
Light Industrial	33.13	32.75		0.00	0.00		33.13	32.75	
<i>Subtotal - Employment</i>	<i>63.35</i>	<i>96.26</i>		<i>54.40</i>	<i>81.32</i>		<i>117.75</i>	<i>177.59</i>	
Neighborhood	0.00	211.12	+ 114.60	0.00	44.83	+ 69.06	0.00	255.95	+ 183.66
Corridor/Center	106.19	71.78		0.00	24.23		106.19	96.00	
Regional	144.72	82.61		0.00	0.00		144.72	82.61	
<i>Subtotal - Mixed Use</i>	<i>250.90</i>	<i>365.50</i>		<i>0.00</i>	<i>69.06</i>		<i>250.90</i>	<i>434.56</i>	
Pocket Park	2.45	1.55	+ 24.58	0.00	0.00	+ 14.49	2.45	1.55	+ 10.09
Neighborhood Park	36.67	39.22		47.04	47.04		83.71	86.26	
Community Park	24.20	24.20		13.98	0.00		38.18	24.20	
Regional Park	0.00	0.00		0.00	0.00		0.00	0.00	
Open Space	5.03	5.03		1.76	1.76		6.79	6.79	
Ponding Basin	67.06	89.99		40.12	39.60		107.18	129.59	
<i>Subtotal - Open Space</i>	<i>135.41</i>	<i>159.99</i>		<i>102.90</i>	<i>88.41</i>		<i>238.31</i>	<i>248.40</i>	
Public Facility	4.98	12.64	+ 32.05	16.81	14.78	+ 25.59	21.78	27.42	+ 57.65
Church	9.93	21.20		1.66	34.60		11.59	55.80	
Special School	4.50	4.50		13.88	13.88		18.38	18.38	
Elem. School	56.18	66.17		25.65	25.65		81.82	91.82	
Elem./Middle/High School	145.37	145.37		0.00	0.00		145.37	145.37	
High School	46.95	46.95		0.00	0.00		46.95	46.95	
Fire Station	0.20	3.32		5.32	0.00		5.52	3.32	
<i>Subtotal - Public Facilities</i>	<i>268.10</i>	<i>300.15</i>		<i>63.32</i>	<i>88.91</i>		<i>331.41</i>	<i>389.06</i>	
Grand Total	3,675.75	3,675.75	--	2,430.39	2,430.39	--	6,106.14	6,106.14	--

The parcels that are currently within the County will not be rezoned. Instead, upon a proposal to annex unincorporated land into the city limits, the City of Fresno would prezone the land to a zone that is consistent with the General Plan land use. Once annexation occurs, the County zoning would not apply to the parcel.

Table 2 summarizes the acreages of each land use, the maximum number of units, and the maximum non-residential square footage that would be allowed under the proposed Specific Plan.

TABLE 2: MAXIMUM DEVELOPMENT POTENTIAL WITHIN SPECIFIC PLAN OF THE WEST AREA

GENERAL PLAN LAND USE DESIGNATIONS (AND DENSITY/INTENSITY)	SPECIFIC PLAN ACRES	MAXIMUM DEVELOPMENT POTENTIAL	
		DWELLING UNITS	NON-RESIDENTIAL SF
Low (1-3.5 DU/AC)	516.57	1,807	--
Medium Low (3.5-6 DU/AC)	1,456.98	8,741	--
Medium (5-12 DU/AC)	2,065.37	24,784	--
Medium High (12-16 DU/AC)	275.55	4,408	--
Urban Neighborhood (16-30 DU/AC)	171.64	5,149	--
High (30-45 DU/AC)	51.33	2,309	--
<i>Subtotal - Residential</i>	<i>4,537.44</i>	<i>47,199</i>	<i>--</i>
Community (1.0 Max. FAR)	52.74	--	2,297,354.40
Recreation (0.5 Max. FAR)	41.34	--	900,385.20
General (2.0 Max. FAR)	220.78	--	19,234,353.60
Regional (1.0 Max. FAR)	4.24	--	184,694.40
<i>Subtotal - Commercial</i>	<i>319.10</i>	<i>--</i>	<i>22,616,787.60</i>
Office (2.0 Max. FAR)	88.81	--	--
Business Park (1.0 Max. FAR)	56.02	--	--
Light Industrial (1.0 Max. FAR)	32.75	--	--
<i>Subtotal - Employment</i>	<i>177.59</i>	<i>--</i>	<i>--</i>
Neighborhood (12-16 DU/AC; 1.5 Max. FAR)	255.95	4,095	16,723,773.00
Corridor/Center (16-30 UD/AC; 1.5 Max. FAR)	96.00	2,880	6,272,640.00
Regional (30-45 UD/AC; 2.0 Max. FAR)	82.61	3,717	7,196,983.20
<i>Subtotal - Mixed Use</i>	<i>434.56</i>	<i>10,692</i>	<i>30,193,396.20</i>
Pocket Park	1.55	--	--
Neighborhood Park	86.26	--	--
Community Park	24.20	--	--
Regional Park	0.00	--	--
Open Space	6.79	--	--
Ponding Basin	129.59	--	--
<i>Subtotal - Open Space</i>	<i>248.40</i>	<i>--</i>	<i>--</i>
Public Facility	27.42	--	--
Church	55.80	--	--
Special School	18.38	--	--
Elem. School	91.82	--	--
Elem./Middle/High School	145.37	--	--
High School	46.95	--	--
Fire Station	3.32	--	--
<i>Subtotal - Public Facilities</i>	<i>389.06</i>	<i>--</i>	<i>--</i>
Grand Total	6,106.14	57,891 DU	52,810,183.80 SF

As shown in the table, the Specific Plan would allow for the future development of up to 57,891 DU (including 47,199 DU in the residential category and 10,692 DU in the mixed use category) and 52,810,183.80 SF of non-residential uses. The proposed land use plan also designates public facility uses that are currently existing within the Plan Area, including schools and churches. In the northern portion of the Plan Area, Fire Station No. 18 is located off of West Bullard Avenue at 5938 North La Ventana Avenue. Fire Station 18 will be relocated to a permanent location on

the south side of the 6000 block of West Shaw Avenue to maximize the department's "4 Minutes to Excellence" response time goal. Additionally, the proposed land use plan would allow for approximately 248 acres of park, open space, and ponding basin uses. The Specific Plan also includes circulation and utility improvements, some of which are planned in the City's current program for capital improvements.

The Specific Plan is designed to provide flexibility, so there is an extensive number of hypothetical variations/combinations for residential and non-residential development. However, the data within the above table represents the maximum density allowed without an amendment approved by the City. In effect, this is very likely an overestimate of what will actually be developed, but for purposes of environmental analysis in the EIR it represents the worst-case scenario.

It is noted that the proposed Specific Plan would amend the land uses for approximately half of the land within the Plan Area. The remaining parcels would maintain their existing land use and zoning designations. The parcels that are proposed for change by the proposed land use map are shown in Figure 7.

REVISIONS TO CORE GOALS

In addition to the proposed land use plan, the following are revisions to the core goals provided in the General Plan for the West Area:

1. West Shaw Avenue Town Center: The West Shaw Avenue Town Center (the Town Center) will extend from State Route 99 to the east side of Grantland Avenue and is envisioned to be comprised of mixed-use development supported by enhanced transit service. Land on the south side of West Shaw Avenue will provide additional neighborhood and commercial mixed-use opportunities.
2. Catalytic Corridors: The proposed Specific Plan designates higher density land uses along corridors for the purpose of providing easy access to major arterials and streets, retail centers, and community amenities. Catalytic corridors will include transit services. The corridors are designed to include neighborhood and pocket parks, commercial and retail uses, educational facilities, multi-family dwelling units, and professional offices. The corridors are located on the following streets:
 - a) West Shaw Avenue, from State Route 99 to the east side of Grantland Avenue;
 - b) West Ashlan Avenue, from State Route 99 to the commercial nodes located on the west side of Grantland Avenue;
 - c) North Blythe Avenue, from West Shields to West Ashlan Avenue;
 - d) West Clinton Avenue from State Route 99 to North Brawley Avenue; and
 - e) Veterans Boulevard, from West Gettysburg Avenue to West Barstow Avenue.

PROJECT ALTERNATIVES

CEQA requires that an EIR analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that

requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must “set forth only those alternatives necessary to permit a reasoned choice.” (CEQA Guidelines, Section 15126.6(f).) The CEQA Guidelines provide a definition for a “range of reasonable alternatives” and, thus limit the number and type of alternatives that need to be evaluated in an EIR. An EIR need not include any action alternatives inconsistent with the lead agency’s fundamental underlying purpose in proposing a project. (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1166.)

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, “feasible” is defined as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines 15364)

The inclusion of an alternative in an EIR is not evidence that it is feasible as a matter of law, but rather reflects the judgment of lead agency staff that the alternative is potentially feasible. The final determination of feasibility will be made by the lead agency decision-making body through the adoption of CEQA Findings at the time of action on the Project. (Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 477, 489 see also CEQA Guidelines, §§ 15091(a)) (3) (findings requirement, where alternatives can be rejected as infeasible); 15126.6 ([an EIR] must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation”).) The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6 (f) (1)).

ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Equally important to attaining the project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a less-than-significant level. The exact alternatives that will be evaluated in the Draft EIR will be determined through the Notice of Preparation (NOP) and Scoping Process. Through preliminary discussions, there are three alternatives to the proposed Specific Plan that are being contemplated for evaluation in the Draft EIR. The alternatives being considered include the following:

- **No Project (Existing General Plan) Alternative:** Under this alternative, the Plan Area would remain in its current General Plan land use and zoning designations. Future development allowed under the existing General Plan land use map would be permitted in the Plan Area.
- **Regional Park Alternative:** Under this alternative, future development in the Plan Area would occur similar to what would be allowed under the proposed land use map. However, this alternative would provide a Regional Park within the Plan Area, which would be a minimum of 40 acres in size.
- **Lower Density Alternative:** Under this alternative, future development in the Plan Area would occur similar to what would be allowed under the proposed land use map, but at lower densities.

It is noted that the final alternatives selected for analysis in the Draft EIR will be based on the public scoping process, including input received through public comment.

PLAN ADOPTION AND REGULATION

The Specific Plan may include certain development regulations and standards that are intended to be specific to the Specific Plan Area. Where there is a matter or issue not specifically covered by the Specific Plan development regulations and design standards, the Fresno Zoning Code would apply. Where there is a conflict between the Specific Plan and the Zoning Code, the Specific Plan would prevail.

The Specific Plan is intended to be adopted by the City Council and to serve as a tool for the City of Fresno to implement. The Specific Plan is to be used by designers, developers, builders, and planners, to guide development of the Plan Area. The land use, development standards, and design guidelines are provided to ensure that all proposed developments remain consistent with the vision established by the Specific Plan as the Project is built over time. The Specific Plan development concepts, design guidelines, and standards are in accordance with the City's General Plan, Municipal Ordinances, and City Specifications. The Specific Plan shall be used to review, process, and approve development proposals for the Project site including but not limited to site specific development applications and site improvement plans.

TYPE OF EIR

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. The program-level analysis considers the broad environmental effects of the proposed project as a whole.

It is noted that the Specific Plan provides a very broad level of planning detail. To the extent that sufficient detail is available in the Specific Plan, a more detailed level of analysis is provided in this EIR. Examples of a more detailed level of analysis would include topics that are related to the physical acreage affected (i.e. the project footprint), maximum number of units (or FAR), land uses/zoning, or other design parameters. In many cases, there will be site specific uses that

will have design details developed at a later date. These details are unknown at this time and cannot reasonably be analyzed at a project-level at this time.

This EIR examines the planning, construction and operation of the project. The program-level approach, with limited project-level analysis, is appropriate for the proposed project because it allows comprehensive consideration of the reasonably anticipated scope of the development plan; however, as discussed above, not all design aspects of the future development phases are known at this stage in the planning process. Subsequent individual development that requires further discretionary approvals will be examined in light of this EIR to determine whether additional environmental documentation must be prepared.

CEQA Guidelines Section 15168 states that a program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1. Geographically,
2. As logical parts in the chain of contemplated actions,
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or
4. As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

According to CEQA Guidelines section 15168, subdivision (c)(5), “[a] program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible.” Later environmental documents (EIRs, mitigated negative declarations, or negative declarations) can incorporate by reference materials from the program EIR regarding regional influences, secondary impacts, cumulative impacts, broad alternatives, and other factors (CEQA Guidelines Section 15168[d][2]). These later documents need only focus on new impacts that have not been considered before (CEQA Guidelines Section 15168[d][3]).

Section 15168(c), entitled “Use with Later Activities,” provides, in pertinent part, as follows:

Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared:

1. If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration.
2. If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activities as being within the scope of the project covered by the program EIR, and no new environmental document would be required.
3. An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.

4. Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.

Here, the City anticipates preparing an initial study whenever landowners within the Plan Area submit applications for site-specific approvals (i.e. tentative maps, conditional use permits, or other discretionary entitlements). The initial study would serve in part as a consistency checklist to determine if the application for site specific approval is consistent with the General Plan, Specific Plan, Conditions of Approval, and Mitigation Measures, and it would also include a review of the project details relative to what was anticipated and analyzed in the program EIR (i.e. are there new environmental effects that were not covered by the program EIR). The City's expectation, at least at present, is that the initial study will conclude that most components of the Specific Plan can be developed with no new analysis of environmental effects given that there has been analysis in this program EIR. In some cases, however, a site-specific application (i.e. commercial use) may have specific issues associated with the project, or business, that this program EIR could not anticipate given the information that was available at this time. In those situations, the detailed site-specific information from that application could have site-specific effects not wholly anticipated in this EIR and would require some additional environmental review. (See also CEQA Guidelines section 15063, subd. (b)(1)(C).)

Future site-specific approvals may also be narrowed pursuant to the rules for tiering set forth in CEQA Guidelines Section 15152. "[T]iering is a process by which agencies can adopt programs, plans, policies, or ordinances with EIRs focusing on 'the big picture,' and can then use streamlined CEQA review for individual projects that are consistent with such...[first tier decisions] and are...consistent with local agencies' governing general plans and zoning.'" (*Koster v. County of San Joaquin* (1996) 47 Cal.App.4th 29, 36.) Section 15152 provides that, where a first-tier EIR has "adequately addressed" the subject of cumulative impacts, such impacts need not be revisited in second- and third-tier documents. Furthermore, second- and third-tier documents may limit the examination of impacts to those that "were not examined as significant effects" in the prior EIR or "[a]re susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means." In general, significant environmental effects have been "adequately addressed" if the lead agency determines that:

1. they have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental impact report; or
2. they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

Here, as noted above, the City anticipates preparing Initial Study whenever landowners within the Plan Area submit applications for site-specific approvals (i.e. tentative maps, conditional use

permits, or other discretionary entitlements). The checklist would serve in part as a consistency checklist to determine if the application for site specific approval is consistent with the General Plan, Specific Plan, Conditions of Approval, and Mitigation Measures, and it would also include a review of the project details relative to what was anticipated and analyzed in the program EIR (i.e. have all significant environmental impacts identified been “adequately addressed” in the program EIR). Thus, if a new analysis is required for these site-specific actions, it would focus on impacts that cannot be “avoided or mitigated” by mitigation measures that either (i) were adopted in connection with the Specific Plan or (ii) were formulated based on information in this EIR.

In addition, because the EIR addresses the effects of rezoning the land within the proposed Plan Area, future environmental review can also be streamlined pursuant to Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183. These provisions, which are similar but not identical to the tiering provisions, generally limit the scope of necessary environmental review for site-specific approvals following the preparation of an EIR for a “zoning action.” For such site-specific approvals, CEQA generally applies only to impacts that are “peculiar to the parcel or to the project” and have not been previously disclosed, except where “substantial new information” shows that previously identified impacts would be more significant than previously assumed. Notably, impacts are considered not to be “peculiar to the parcel or to the project” if they can be substantially mitigated pursuant to previously adopted, uniformly applied development policies or standards. As noted above, the City anticipates that, in assessing the extent to which the Specific Plan EIR has previously addressed significant impacts that might occur with individual projects, the City may conclude that in some instances (e.g., with respect to agricultural resources, cultural resources, geology, soils, and paleontological resources), no further analysis beyond that found in the program EIR will be necessary.

Finally, for purely residential projects consistent with the Specific Plan, the City intends to preserve its ability to treat such projects as exempt from CEQA pursuant to Government Code section 65457. Subdivision (a) of that statute provides that “[a]ny residential development project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an [EIR] has been certified after January 1, 1980, is exempt from the requirements of [CEQA].” The statutes go on to say, moreover, that “if after adoption of the specific plan, an event as specified in Section 21166 of the Public Resources Code occurs, the exemption provided by this subdivision does not apply unless and until a supplemental [EIR] for the specific plan is prepared and certified in accordance with the provisions of [CEQA]. After a supplemental [EIR] is certified, the exemption ... applies to projects undertaken pursuant to the specific plan.” (See also CEQA Guidelines section 15182.)

When purely residential projects are proposed, the City will consider whether they qualify for this exemption or whether the Specific Plan EIR must be updated through a supplement to this EIR or a subsequent EIR as required by Public Resources Code section 21166 and CEQA Guidelines sections 15162 and 15163.

PROJECT ENTITLEMENTS

The City of Fresno will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR and adoption of the Mitigation Monitoring and Reporting Program (MMRP);
- Approval of the Specific Plan of the West Area;
- Approval of the General Plan amendment modifying land uses.
- Approval of the Zoning Ordinance amendment modifying zoning.

The EIR analyzes the impacts of the Specific Plan and the anticipated subsequent filing of maps and other development applications in the future. Therefore, the EIR analyzes the maximum impacts of the Specific Plan, including these applications yet unfiled, so that future filings will not require separate environmental analysis, as long as development proposed does not substantially deviate from the approved Specific Plan.

ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following general procedural steps:

NOTICE OF PREPARATION

The City must circulate a NOP of an EIR for the proposed project to responsible and trustee agencies, the State Clearinghouse, and the public. A public scoping meeting must be held during the public review period to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP will be considered during preparation of the Draft EIR. The NOP and responses to the NOP by interested parties will be presented in an appendix to the EIR.

DRAFT EIR

The Draft EIR will contain a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft EIR will identify issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP will be considered in preparing the analysis in the EIR. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the 45-day public review period.

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to significant environmental issues raised either in written comments received during the public review period or in oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

CEQA Guidelines Section 15090 requires lead agencies to certify the final EIR prior to approving a project. The lead agency decision making body shall certify that (i) the Final EIR has been completed in compliance with CEQA; (ii) that the Final EIR was presented to the decision-making body, which reviewed and considered the information contained in the Final EIR prior to approving the project; and (iii) that the Final EIR reflects the lead agency's independent judgment and analysis.

For the proposed project, the City Council shall be the City's ultimate decision-making body. The Council will therefore review and consider the Final EIR and make a determination regarding whether the document is "adequate and complete." In general, a Final EIR meets this standard if:

1. The EIR shows a good faith effort at full disclosure of environmental information; and
2. The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

The level of detail contained throughout the EIR is intended to be consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which the document is based. The Guidelines state as follows:

"An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the project. As part of project approval, the City also is also required to adopt a Mitigation Monitoring and Reporting Program, as described below, prepared in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097. This Mitigation Monitoring and Reporting Program must include all of the mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment, and would be designed to ensure that these measures are actually carried out during project implementation.

USES OF THE EIR AND REQUIRED AGENCY APPROVALS

The City of Fresno will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Other agencies may be required to issue permits or approve certain aspects of the proposed project.

Actions that would be required from the City include, but are not limited to, the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Fresno General Plan Amendments;
- Approval of City of Fresno rezoning;
- Approval of Specific Plan;
- Approval of Development Agreement;
- Approval of future tentative and final maps;
- Approval of future improvement plans;
- Approval of future grading plans;
- Approval of future building permits;
- Approval of future site plan and design review;
- City review and approval of future project utility plans.

The other governmental agencies that may require approvals in connection with the project include, but are not limited to, the following:

- California Department of Fish and Wildlife;
- California Department of Transportation;
- Central Valley Regional Water Quality Control Board - Storm Water Pollution Prevention Plan approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District - Approval of construction-related air quality permits;
- San Joaquin Valley Air Pollution Control District - Authority to Construct, Permit to Operate for stationary sources of air pollution;
- State Water Resources Control Board.

AREAS OF POTENTIAL IMPACTS

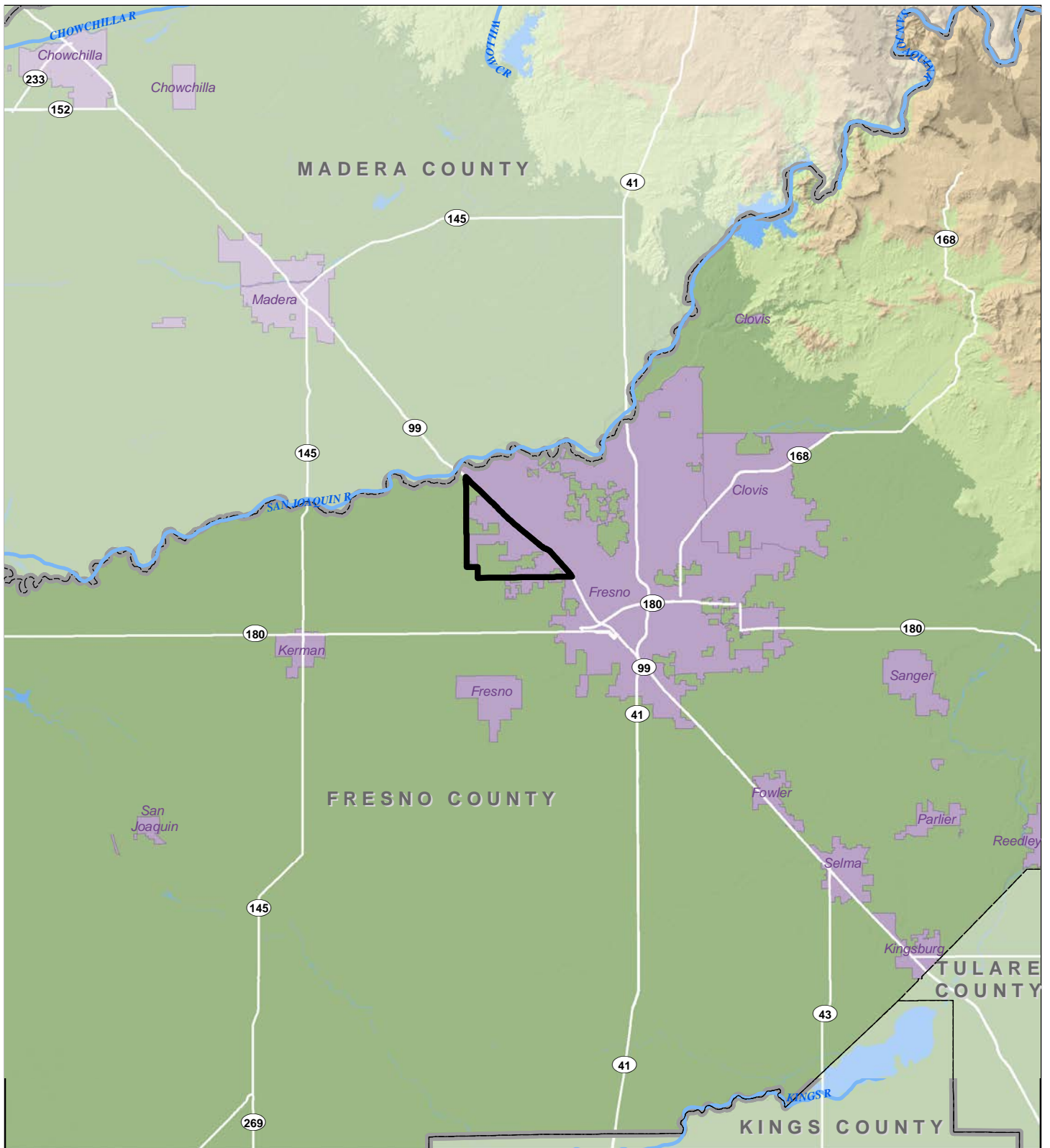
An Initial Study has not been prepared for this project. All environmental topics identified in Appendix G of the State CEQA Guidelines will be analyzed in the EIR, including: Aesthetics, Agricultural and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gases and Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities, Wildfire, Cumulative Impacts, and Growth Inducing Impacts.

Date: June 28, 2019




Signature: 

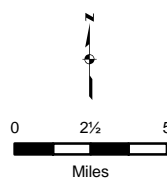
Name/Title: Rodney L. Horton, MPA, Project Planner

Phone/Email: 559-621-8181/Rodney.Horton@fresno.gov



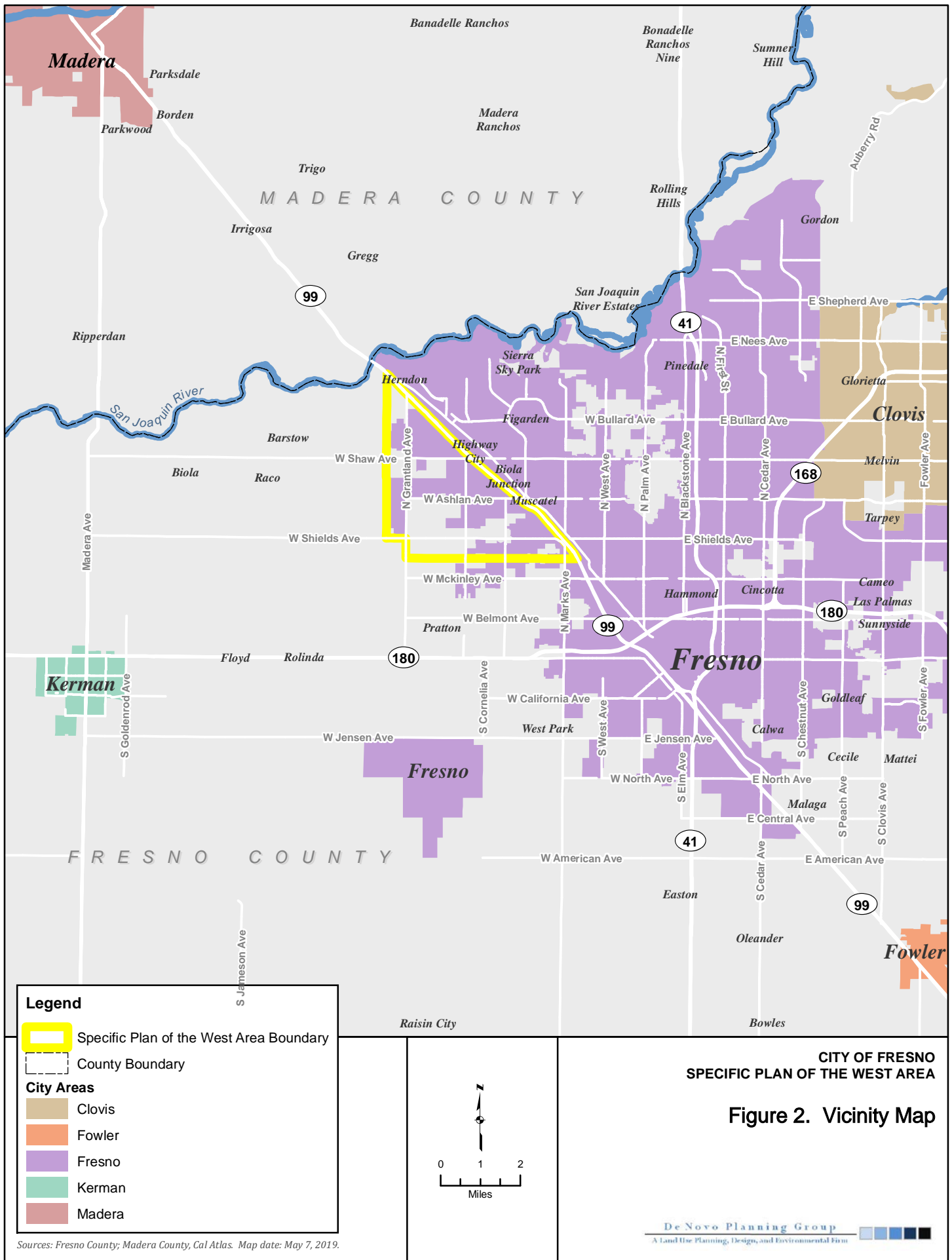
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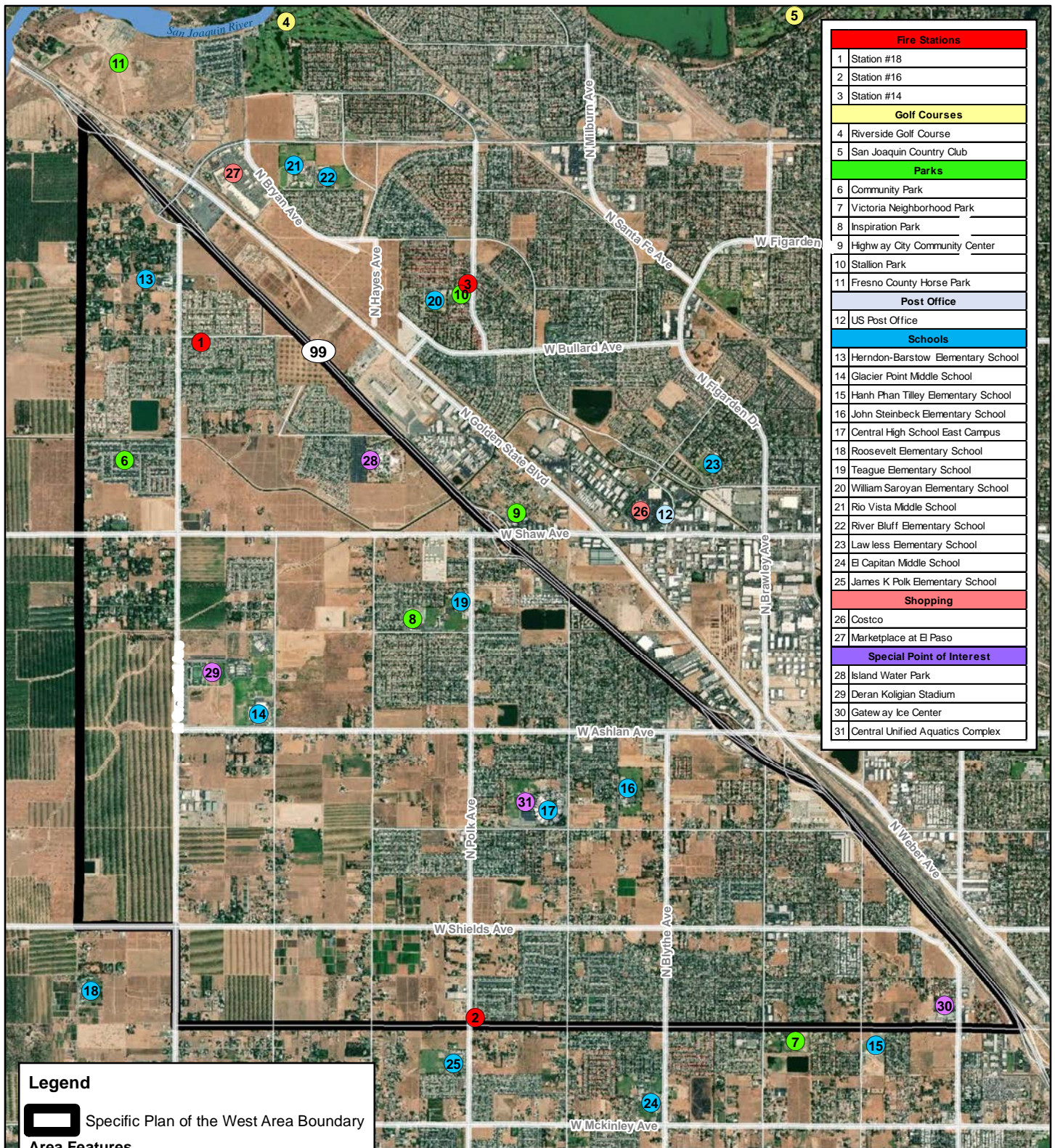
-  Specific Plan of the West Area
-  City Area
-  County Boundary



CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

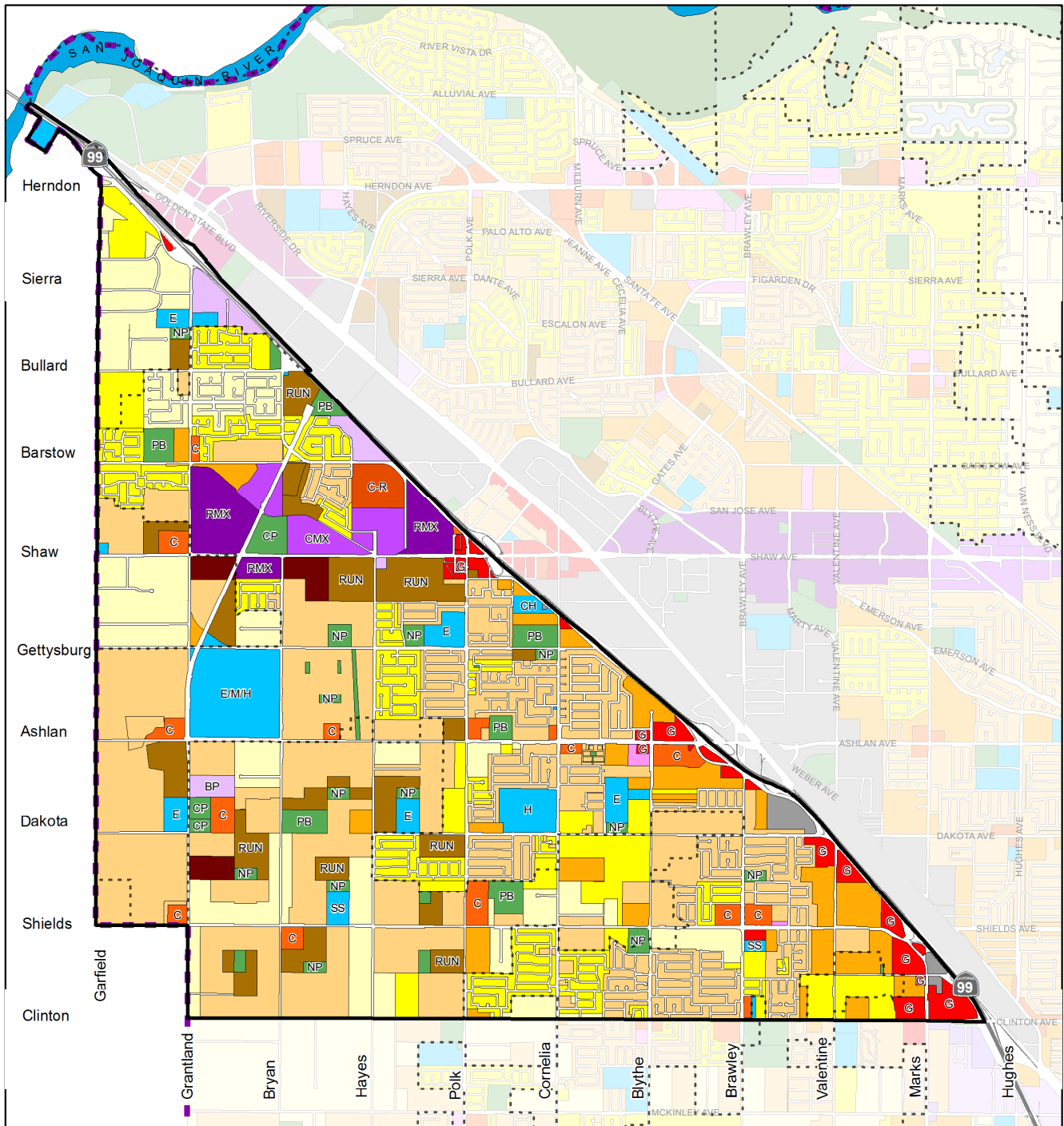
Figure 1. Regional Location Map





**CITY OF FRESNO
SPECIFIC PLAN OF THE WEST AREA**

Figure 3. Aerial View of Project Site



BOUNDARIES

- City Limits
- West Area Specific Plan Boundary
- Sphere Of Influence

RESIDENTIAL

- Low Density (1-3.5 D.U./acre)
- Medium Low Density (3.5-6 D.U./acre)
- Medium Density (5.0-12 D.U./acre)
- Medium High Density (12-16 D.U./acre)
- Urban Neighborhood (16-30 D.U./acre)
- High Density (30-45 D.U./acre)

PUBLIC FACILITIES

- Public/Quasi-public Facility
- SS Special School
- E Elementary School
- E/M/H Elementary, Middle & High School
- H High School
- CH Church
- FS Fire Station

EMPLOYMENT

- Office
- BP Business Park
- Light Industrial

MIXED USE

- CMX Corridor/Center Mixed Use
- RMX Regional Mixed Use

OPEN SPACE

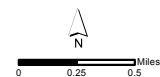
- CP Community Park
- PB Open Space - Ponding Basin
- NP Neighborhood Park
- Open Space
- P Park

COMMERCIAL

- Community
- Recreation
- General

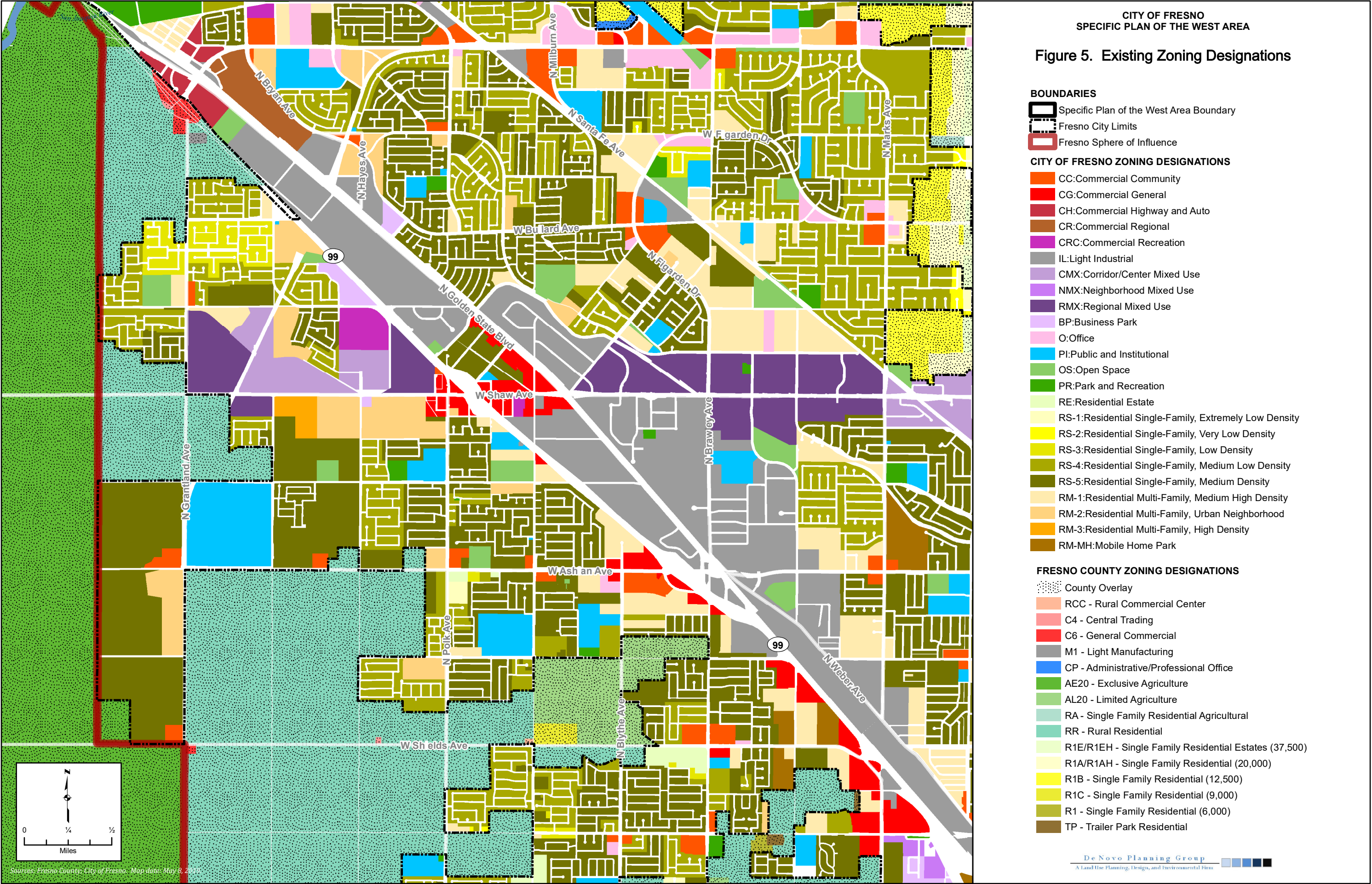
CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

**Figure 4. Existing General
Plan Land Use Designations**



CITY OF FRESNO
SPECIFIC PLAN OF THE WEST AREA

Figure 5. Existing Zoning Designations



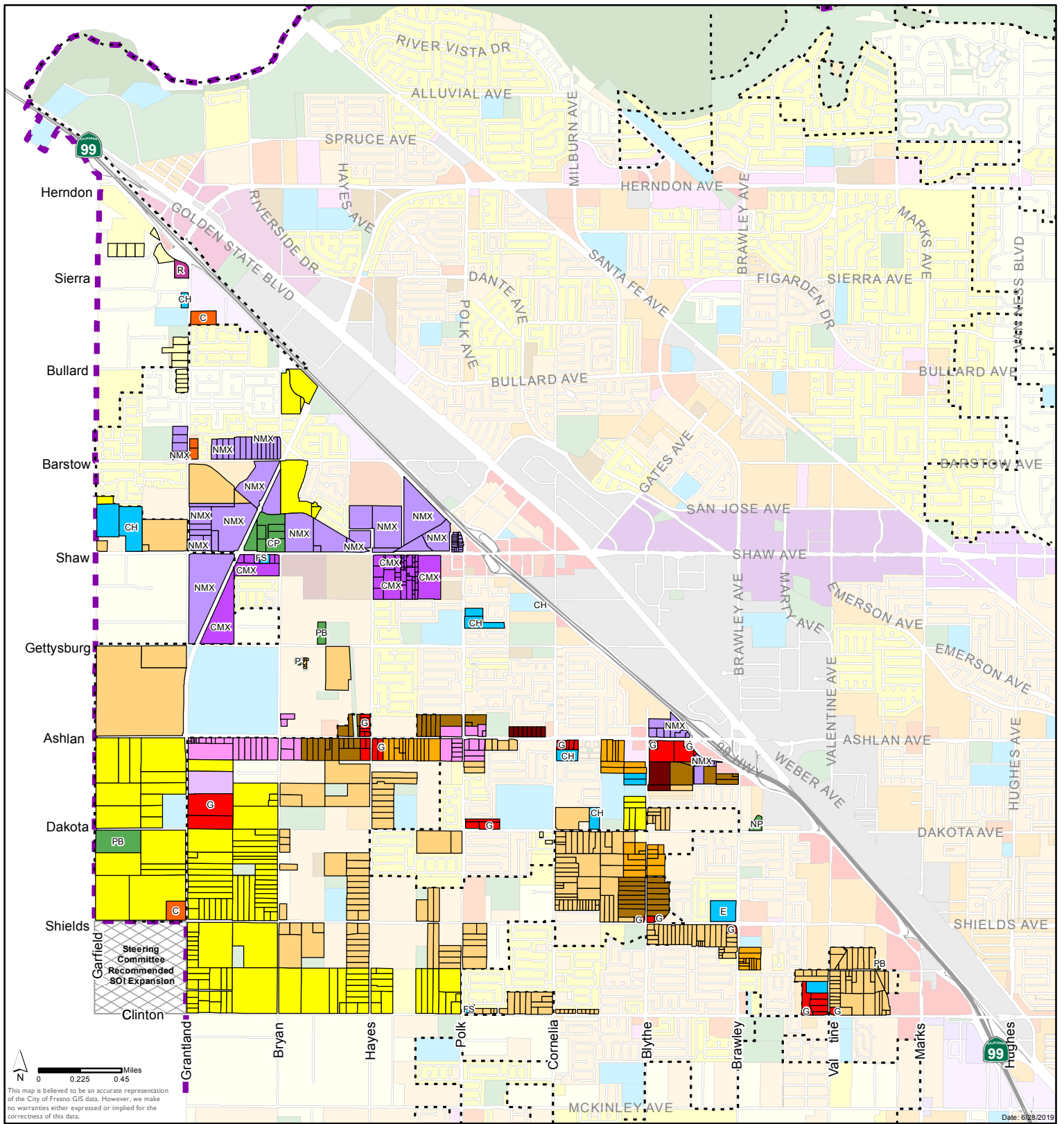


Figure 7. Parcels Proposed for Change in Proposed Land Use Map

From: Steve McMurtrey <smcmurtrey@denovoplanning.com>
Sent: Thursday, August 1, 2019 4:22 PM
To: 'Elise Carroll'; 'Josh Smith'
Subject: FW: Notice of Preparation for the Specific Plan of the West Area
Attachments: image001.png

NOP comments

Steve McMurtrey | Principal
De Novo Planning Group | www.denovoplanning.com | 916.580.9818
smcmurtrey@denovoplanning.com
Northern California | 1020 Suncoast Lane #106 | El Dorado Hills, CA 95762
Southern California | 180 East Main Street # 108 | Tustin, CA 92780

From: Rodney Horton <Rodney.Horton@fresno.gov>
Sent: Thursday, August 1, 2019 11:48 AM
To: 'smcmurtrey@denovoplanning.com' <smcmurtrey@denovoplanning.com>
Subject: FW: Notice of Preparation for the Specific Plan of the West Area

Please see the comments below.

Rodney

From: April Henry [<mailto:april.hccd@gmail.com>]
Sent: Thursday, August 01, 2019 9:57 AM
To: Rodney Horton
Subject: Re: Notice of Preparation for the Specific Plan of the West Area

Rodney,

As I am becoming intimately involved with DRIVE for a 10 year plan, and am sitting specifically on the core team of "Civic Infrastructure for Low Opportunity Neighborhoods", as a community leader and community member, I am really concerned that this plan is riddled with a lack of true community input. It became so academically wordy that only those on the committee who seem to have personal agendas for what they wanted to see done, it lost what really needs to be done in forgotten Fresno, and makes huge assumptions based on land use (that plan also was not the voice of the community) and assumes large chunks of land owners will want to change their zoning/use

I don't know how to change that but it can cause initiative changes that really dont accomplish the overall wish of the neighborhoods and then work against this 20 year plan.

On Fri, Jun 28, 2019, 4:50 PM Rodney Horton <Rodney.Horton@fresno.gov> wrote:



Dear Friends of the West Area and Interested Parties,

I am pleased to provide you with an electronic copy of the Notice of Preparation for the Specific Plan of the West Area. This is to notify public agencies and the general public that the City of Fresno, as the Lead Agency, will prepare an Environmental Impact Report (EIR) for the Specific Plan of the West Area. The City of Fresno is interested in the input and/or comments of public agencies and the general public as to the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project, and public input. Responsible/trustee agencies will need to use the EIR prepared by the City of Fresno when considering applicable permits, or other approvals for the proposed project. Consistent with the time limits prescribed by California State law, your input, comments or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 p.m., August 2, 2019. Please send your comments/input (including the name for a contact person in your agency) to me. You may use the following methods:

Mail:

City of Fresno – DARM

Attn: Rodney Horton

2600 Fresno Street, Suite 3065

Fresno, CA 93721-3604

Electronic mail:

rodney.horton@fresno.gov

Also, on July 24, 2019, the City of Fresno will conduct a public scoping meeting to solicit input and comments from public agencies and the general public on the proposed project and scope of the EIR. This meeting will be held at the Glacier Point Middle School, Cafeteria, located at 4055 N. Bryan Avenue, Fresno, CA 93722, from 6:00 PM to 7:30 PM. This meeting will be an open house format and interested parties may drop in to review the proposed project exhibits and submit written comments at any time between 6:00 PM and 7:30 PM. Representatives from the City of Fresno and the EIR consultant will be available to address questions regarding the EIR process and scope. Members of the public may provide written comments throughout the meeting.

If you have any questions regarding the scoping meeting, contact me at (559) 621-8181 or rodney.horton@fresno.gov.

Thank you,

Rodney L. Horton, MPA

Planner III

Development and Resource Management Department

Rodney.Horton@fresno.gov

559.621.8181

Disclaimer:

This email is for informational purposes, and is not intended to spark a dialogue between Steering Committee members with or without the public, which may infringe on the Brown Act. These matters may be discussed at future public Steering Committee meetings or with City staff.

Please be advised, in accordance with the applicable provisions of the Brown Act, all forms of community feedback and public input that is provided to the City of Fresno will be made available to the general public.

Elise Carroll

From: Steve McMurtry <smcmurtry@denovoplanning.com>
Sent: Friday, August 2, 2019 3:15 PM
To: 'Elise Carroll'
Subject: FW: Concerned citizen of Herndon Acres

Steve McMurtry | Principal

De Novo Planning Group | www.denovoplanning.com smcmurtry@denovoplanning.com | 916.580.9818 Northern California | 1020 Suncast Lane #106 | El Dorado Hills, CA 95762 Southern California | 180 East Main Street # 108 | Tustin, CA 92780

-----Original Message-----

From: Rodney Horton <Rodney.Horton@fresno.gov>
Sent: Friday, August 2, 2019 9:02 AM
To: 'smcmurtry@denovoplanning.com' <smcmurtry@denovoplanning.com>
Subject: FW: Concerned citizen of Herndon Acres

-----Original Message-----

From: Lydia [<mailto:creole10@sbcglobal.net>]
Sent: Friday, August 02, 2019 9:01 AM
To: Rodney Horton
Cc: creole10@sbcglobal.net
Subject: Concerned citizen of Herndon Acres

Good morning Mr. Horton,

I hope your having a great day. My husband and I moved to this quiet neighborhood we call "Herndon Acres" 18 years ago because it was so peaceful here. We were hoping we would continue to be the Forgotten neighborhood as said by the Fresno Sheriffs Department called us but when things started to change and houses were being built we were in fact "The Forgotten neighborhood" now named "Forgotten FRESNO". No fault of ours, just left out of the loop of everything being built around us. It's truly disgusting the traffic issues are out here. I cringed every school day just waiting for something horrific to happen. Praying it doesn't.

I would especially talk about all the traffic at the 76 station and the 18 wheelers that take Grantland as an alternate route. It's getting worse by the day. This traffic and blocking the streets is a constant each and every day. I'm sickened by it. We are. Asking as a safety measure that you and your constituents an remedy this problem. Please help us instead of allowing people to disregard us. We are all very proud tax paying citizens and would love to see our stress flow like they are supposed to. Thank you.

Carl & Lydia Franklin
7061 W. Tenaya Avenue
Fresno, CA 93723
559-907-1136

August 1, 2019

TO: Rodney Horton
City of Fresno
FROM: Cathy Caples
7232 W Dovewood Lane
Fresno CA 93723
(559) 304 2687
cathybcaples@gmail.com

RE: West Area Specific Plan EIR Scope

Thank you for the opportunity to provide comment during this phase of the West Area Specific Planning Process. It has been an interesting and eye-opening experience to serve on the West Area Steering Committee representing Council District 2 which is the area north of Shaw and West of 99 and so as you read my comments think more specifically about this area within the planning area as it is the area I am most familiar with.

Aesthetics:

- One of the concerns of this area is the view of travelers coming through Fresno on Hwy 99. We get a bad rap as a city because people view the entire community from this perspective and it's really ugly. This area also has the first exits off of Hwy 99 into Fresno County. There has been discussion about creation of a Welcome Center in this area that could welcome travelers highlighting local business & agricultural economy to increase tourism including visitor's information for wineries, agricultural products like raisins, stone fruit, nuts, restaurants and attractions. Although Herndon is the first exit and someday may have an Aquarium at the River, with the right type of Urban Corridor at Shaw or Bullard exits, the Welcome Center may offer more benefits to Fresno County with a better traffic flow from Hwy 99 to the West.
- Because this area was agricultural and Rural Residential (RR) and many of the orchards have been eliminated, this area has no aesthetics and is in great need of landscape and trees. Tree Fresno has been working on a plan for south of Shaw but the area to the north is not included in that planning process. The RR properties along Shaw are real eyesores with collections of junk, or in one case the property has become a truck stop with sometimes 18 semi trucks parked on the property which could become hazardous if there is every a fuel leak.
- We value our agricultural roots, there has been discussion of art and planting to reflect that history. Italian farmers mostly settled in this area and to the west of 99 we have Forestiere Underground Gardens, a significant historical feature and tourist attraction for Fresno. The Highway City village just west of 99 exit is in need of beautification and/or redevelopment to enhance the entrance to Fresno for tourists.

Agricultural Resources:

- Within the area most of the agricultural that remains is new orchards that were planted during the Recession to give a developer a tax break until it was time to tear them out and build. There is a treasured farm stand with strawberries and garden vegetables on the NE corner of Grantland and Shaw. It is hoped that we can improve the aesthetics of the Farm Stand and it will remain under the NMX land use designation as a feature of the transition from urban corridor along Shaw to transition to agriculture

Air Quality:

- We have air pollution from Highway 99, trains to the east and agriculture to the west. And lots of dust from construction.

Biological Resources:

- We are on the edge of the country and still have animals living in our midst. One of our neighbors who is a bird watcher has sighted 28 different kinds of birds with a large flock Canadian Geese that live year round in the ponding basin on Herndon. That basin also has a multi-generational troop of fox. Lots of lizards, an occasional snake, bobcat and coyote.
- Not sure if there is something to consider environmentally in the torn down orchard (North of Shaw, Parkway to Grantland) that has left the trees to rot since at least 2008.
- The San Joaquin River is on the northern point of this area with a planned Aquarium by a nonprofit in the fundraising stage. There is not much of the land in the City of Fresno but it would be nice if the land surrounding the Aquarium could be preserved as trail or park. One landowner owns much of the Bluff property and has a horse stable and event area at the Western part of his land.

Cultural and Tribal Resources:

- There is a large Sikh population in the WASP area as it is also home to the Sikh Institute of Fresno. Our Sikh neighbors, especially the gentleman, spend a lot of time in the pocket parks and walking in the neighborhood. It would be great if there were enough benches or gathering spots with chairs for them to sit upon.

Geology, soils and seismicity:

- Hardpan often taking at least 3-5 feet to break through for proper planting and drainage.
- There is an existing canal that runs along Barstow and cuts down to almost Shaw between Grantland. It is currently used as a dusty dirt trail by residents. We are hopeful that this will become a permanent landscaped trail along the canal that will connect with the planned trail system for Veterans Blvd and the proposed park.

Greenhouse Gas Emissions and Energy: Many of the new homes have solar. As development happens, it is hoped that future technology would be taken into consideration with charging stations for cars. Including underground parking in the urban corridors to eliminate the need for so much hot tar to pave parking lots.

Hazards and Hazardous Materials

- There is a property on northside of Shaw near Bryan that has become a truck stop with sometimes 18 semi-trucks parked on the property which could become hazardous if there is every a fuel leak.

Hydrology and Water Quality

- Much concern has been expressed by the longtime RR residents about the amount of water being used for new construction and how that will impact their wells.

Land Use and Planning

- City of Fresno has a huge deficit in the inventory of affordable housing. A concern of residents has been that the first time home buyer homes are causing a more transient population in the schools in the area as people move away to areas with larger homes as families grow.
- There is also concern that affordable housing not be concentrated in any one particular area of the planning area but spread equitably throughout.
- As the Urban Corridor is developed along Shaw Avenue it is hoped that we will consider this more an urban center like Santana Row in San Jose or Whittier Blvd near the college without Big Box Stores like WalMart, Costco, Ikea with big tar parking lots. It is desired that it be a more eco friendly shopping environment with underground parking, local businesses, restaurants, maybe a local theater, museum or art galleries featuring local artists with a architectural feel of the tribute to agriculture we desire. In the NW area we already have El Paseo with a growing variety of chain stores and larger retailers. We would like to be able to walk to and through this village with patios facing the trail and green space.

Noise

- In addition to trains and cars, for some atmospheric reason we hear the gunfire from the Sheriff's Gun Range on the E side of 99 and the first day of dove season each year it's like a war zone.

Population and Housing

- There is a large Sikh population in the WASP area as it is also home to the Sikh Institute of Fresno. Our Sikh neighbors, especially the gentleman, spend a lot of time in the pocket parks and walking in the neighborhood. It would be great if there were enough benches or gathering spots with chairs for them to sit upon.
- There is an aging population in our area with no senior services, extremely limited public transportation and medical care
- This area also has a very young population with limited day care and enrichment services.
- Although our income is higher than the rest of Fresno, our education levels are lower with less people with post high school education than the rest of Fresno and we are the further from any higher education opportunities. For the seniors, it would be great to connect the Mosher Learning at CSUF to our area along the Urban Corridor which will have public transportation. We discussed having an educational center along Grantland south of Shaw close the new High School to allow students an opportunity for enrichment as well, perhaps a satellite Community College Campus.

Public Services and Recreation

- The park choices: there are 3 sites to be studied as a regional park for this area. I would recommend that the scoping consultants study the Park Master Plan adopted by the City of Fresno and take into consideration that information in studying the area and these sites. I would like to call attention to the large aging population in addition to the younger population needs to be considered.
 - Park by the River – which will cause traffic congestion in the area with not enough space for parking etc and close to regional park on the general plan on the east side of 99 at the River. It is remote and has no planned access to public transportation.
 - Park in the SW corner of the area, which is close to the largest park already in the study area and close to Roeding and Kearny regional parks as well as the Sports complex in the Southwest Area Specific Plan. It is also away from the majority of the population and not easily accessible by most.
 - Park currently show adjacent to Parkway on the map. This park discussion was first raised by my neighborhood as part of the discussion of where we could dream to live. We envisioned a park as a feature of the urban corridor being planned along Shaw Avenue.
 - The vision was to create a feature for the City of Fresno that would highlight agriculture, spur economic development, raise the opinion of the drive through visitors AND include a canopied walking, fitness and play space for residents at the same time.
 - The only green space north of Shaw currently are pocket parks in neighborhoods that have no room for family parties and the most of the yards are too small as well.
 - When we first raised the idea – the park was closer to the center of the vacant land north of Shaw with a Shaw entrance and was moved to Parkway when we were told that it needed to serve a lower social economic population (a misconception of the elected officials).

- One advantage to this location, is that it is adjacent to a seasonal water park that might have potential for public private partnership over parking and event space for Holiday Ice Rink or Harvest and Blossom Festivals.
- We would love to see an old fashioned bandstand type amphitheater for Friday night concerts in a non-alcoholic venue (currently only wineries offer this option) and basketball courts so we stop getting cited by code enforcement for having street basketball hoops.
- If you have any questions about this vision, please contact me. I was disheartened to hear at the scoping meeting that already this site has air quality issues etc – we would happily consider other locations in the urban corridor. It could just as easily be in the current general plan location with a connector to the trails along veteran's and the canal.

Transportation and Circulation:

- My biggest transportation concern is the zipper streets throughout the planned area where new development meets old with routes to schools that do not allow for safe routes to schools for our children.
- Congestion on Grantland north of Shaw is horrible and I know you have heard from many residents on this issue so I am not going to dwell on it. It is of particular concern when county land use change is under consideration. The County planning commission makes a decision that effects the City of Fresno. Such an instance is in the courts right now when the county approved an animal shelter on zoned RR land changing the land use to a specific purpose.

Utilities and Service Systems

- Police Department – we are covered by NW and there are too few officers to cover our area and the rest of the NW with substation at Marks and W Shaw.
- Fire Station is currently in planned construction stage.

Wildfire

- There was a grass fire last year in the torn down orchard (North of Shaw, Parkway to Grantland)
- There is currently no fire station in the NW section of the planned area (one is in the works on the South side of Shaw at Bryan)



Central Grizzlies Youth Football & Cheer

My name is Ashleigh Garrett, I am the President of a non-profit youth organization called the Central Grizzlies Youth Football and Cheer. Parents and children for the CGYF program are families of the Northwest community. Our biggest issue as an organization is trying to find a location for our program to not only have a practice field but also somewhere to have home games. This past 8 months alone we have not been able to find somewhere to accommodate not just my program but other outside organizations as well. We have attempted to request the use school facility fields in the Central Unified School District with resistance. One being there is high demand in facility field request from outside organizations making it almost impossible to accommodate school related activities and outside organizations. Although we may have several parks in the Northwest Area, we only have one park with proper lightening for sports during nighttime use. That park alone cannot accommodate multiple sport organizations at one time during its season. As the Northwest community continues to grow at rapid pace, we are in desperate need of a lightened park space in our community. I am in hopes that approved developers that are coming into our community be required to assist in offsetting a park for our children to have a safe, productive place to engage in activities and promote a healthy lifestyle for our children.

Thank you,

Ashleigh Garrett



DEPARTMENT OF TRANSPORTATION

DATE: July 29, 2019

TO: Jennifer Clark, Director, Department of Planning and Development

FROM: GREGORY A. BARFIELD, Director
Department of Transportation

SUBJECT: Environmental Impact Report for West Area Specific Plan

The City of Fresno Transportation Department, Fresno Area Express (FAX) received the copy of the Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the West Area Specific Plan.

The West Area Specific Plan includes a wide variety of proposed land uses, ranging from low density residential to high density residential, regional mixed use, recreation commercial, schools, fire stations and other land uses, as well as the required transportation and utility improvements. An accessible and well-connected transportation network is a critical component of the area's quality of life.

Given that FAX currently provides only one transit route west of State Route 99 and that this area is projected for growth, FAX requests that the EIR include a coordinated analysis of transportation alternatives, as well as consideration of potential mitigation measures to help fund transit operations should the EIR determine that transit is a feasible component

In providing transit service, FAX must continually balance the competing needs of productivity and coverage, meaning the performance of its existing transit routes versus service expansions to new and developing areas that are not within proximity of existing services. Ongoing financial constraints must be taken into consideration when evaluating the financial sustainability of operating new transit services. In short, if FAX adds new transit service to any given area, it must remove or reduce service to other areas to keep the operational costs of the system in check. FAX is looking forward to better understanding the environmental impacts of the planned land uses on transportation, traffic congestion, and air quality, as well as the proposed mitigation measures that will support the operation of the most effective transportation network.



INTER OFFICE MEMO

Fresno County Public Library

Date: July 8, 2019

To: Rodney Horton, MPA, Project Manager

From: Karen Coletti, Executive Secretary

Subject: Notice of Preparation of an Environmental Impact Report and Scoping West Area

Reviewed and had no comments.

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

**JUL 19 2019**

Mr. Rodney Horton
City of Fresno, Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, California 93721

Notice of Completion and Environmental Document Transmittal for the Specific Plan of
the West Area, SCH2019069117
Fresno County

Dear Mr. Horton:

The Division of Safety of Dams (DSOD) has reviewed the Notice of Completion and Environmental Document Transmittal for the Specific Plan of the West Area which describes land use planning for the approximate 7,077 acre-foot tract of land for the future development of residential and non-residential uses.

Insufficient information is provided to determine if any of the ponding basins are subject to State jurisdiction for dam safety. Therefore, the City needs to submit preliminary plans so that DSOD can make a jurisdictional determination.

As defined in sections 6002 and 6003, Division 3, of the California Water Code, dams 25 feet or higher with a storage capacity of more than 15 acre-feet, and dams higher than 6 feet with a storage capacity of greater than 50 acre-feet or more are subject to State jurisdiction. The dam height is the vertical distance measured from the maximum possible water storage level to the downstream toe of the barrier.

If any of the ponding basins are subject to State jurisdiction, a construction application, together with plans, specifications, and the appropriate filing fee must be filed with DSOD for this project. All dam safety related issues must be resolved prior to approval of the application, and the work must be performed under the direction of a Civil Engineer registered in California. Erik Malvick, our Design Engineering Branch Chief, is responsible for the application process and can be reached at (916) 565-7840.

If you have any questions or need additional information, you may contact, Area Engineer William Vogler at (916) 565-7828 or me at (916) 565-7827.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ernie M. Tapia'.

Ernie. M. Tapia, Acting Regional Engineer
Southern Region
Field Engineering Branch
Division of Safety of Dams

cc: Governor's Office of Planning and Research
State Clearinghouse
state.clearinghouse@opr.ca.gov

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FORGOTTEN FRESNO
FORGOTTENFRESNO@GMAIL.COM
EIN 83-2685199

Wednesday, July 17, 2019

City of Fresno – DARM
Attn: Rodney Horton
2600 Fresno Street, Suite 3065
Fresno, CA 93721-3604

Dear Mr. Horton,

We the undersigned residents of Forgotten Fresno appreciate the opportunity to comment on the Notice of Preparation for the Specific Plan of the West Area. As the City of Fresno proceeds with the Environmental Impact Report (EIR) for the Specific Plan of the West Area, we would like to request attention to the matters detailed below.

1. The infrastructure of our community has not kept pace with the rapid housing development of the past, present, and future. Commonly Initial Studies submitted to the Development and Resource Management Department during the application process are recommend by staff that the Mitigated Negative Declarations (MND) be approved. Often the MND fails to consider what we constituents consider common sense. Traffic concerns have been severely downplayed in the past for our community. We are currently in litigation for a rezone item with Fresno County where an MND with a traffic study done on a Wednesday was approved. Wednesday's are early out days for Central Unified School District; therefore, typical traffic occurs earlier in the day. This is a clever way to downplay our traffic plight. We would like to request that any future traffic studies submitted are not permitted to be executed on a Wednesday.
2. In speaking to a neighbor that works for the Fresno Fire Department it was alarming to find out that Shaw Avenue traffic signals do not have the ability to be changed during an emergency. Not only are the Levels of Service (LOS) at stoplights utilized to travel our community reprehensible, emergency services are delayed when a response is required. It is very common to see police officers, the fire department, or ambulances stuck on Shaw or Herndon at Golden State or Highway 99. It is abysmal that this has perpetuated as long as it has and we would like to have the widening of the Shaw Avenue at Highway 99 and the underpass at Herndon Avenue and Highway 99 be priorities in the future. We would also like to have the traffic signals improved to have the ability to be controlled by emergency services when required.
3. We are in desperate need of lighted park spaces in our community. Developers should have to mitigate benches, tables, lights, playground structures, and fields for sports activities. To help promote healthier lifestyles a community should be designed to promote that vision. The housing tracts are produced to optimize the number of units therefore resulting in small yard spaces. Many local youth teams do not have a place to adequately practice or play their games. The majority of green space in the West Area is owned by Central Unified School District and it is not the school district's responsibility to provide such spaces for the community at large. Rather than Code Enforcement issuing notices for basketball hoops in the streets the city can have playground spaces mitigated by housing developers.

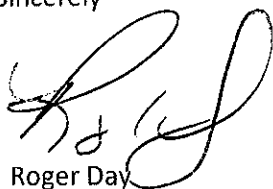
We'd like to request that offsite improvements be near completion before a developer begins their construction. This would be applicable to both commercial and residential construction. For far too many years construction workers and material supply trucks have overwhelmed our roads. With the development of High Speed Rail and Veteran's Boulevard in the works our community will suffer without such mitigation.

4. We are against the intensification of land uses outside of the General Plan. Many of us have been attending the West Side Steering Committee Meetings and have voiced our desires on the record. Serving the personal interests of private developers and corporations at the expense of our constituency is unwelcome.

We are not against development, but we do appeal that the City of Fresno request all necessary mitigation in relation to traffic and public safety for future development applications for the West Area.

We thank you for your time and consideration.

Sincerely



Roger Day

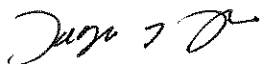


Gurbinder S. Dhaliwal

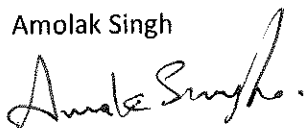
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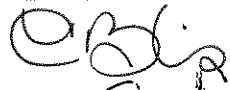
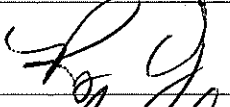
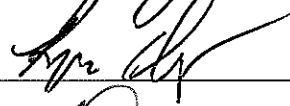

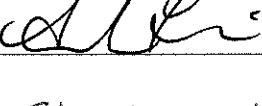
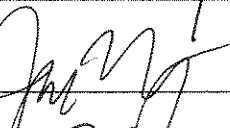
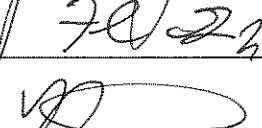
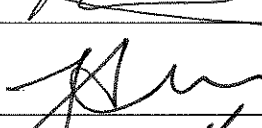
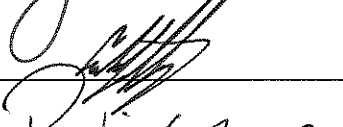
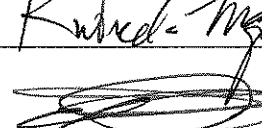
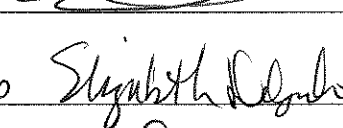

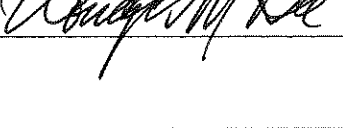
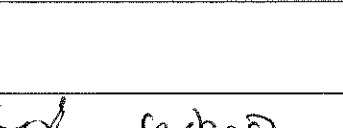
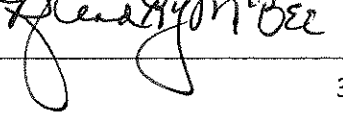



Elisa Bilios



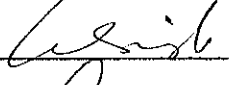
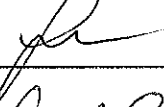

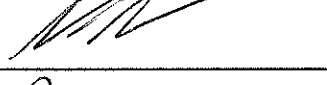
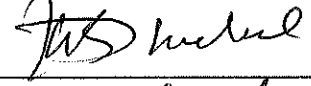

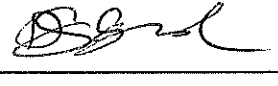
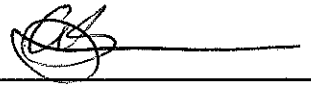
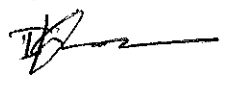



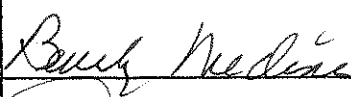
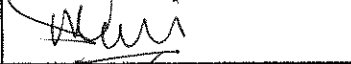

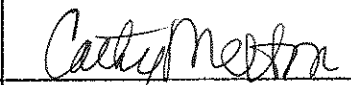


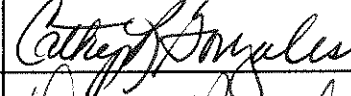
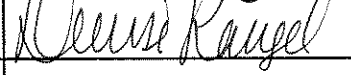

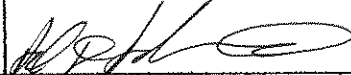

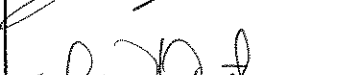


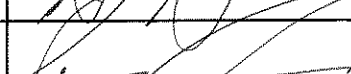


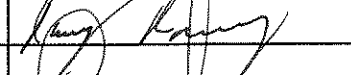
Amolak Singh

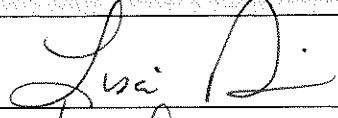
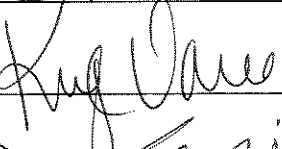

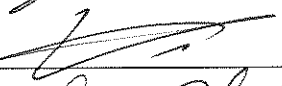

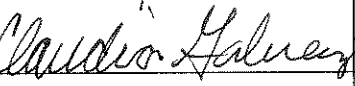
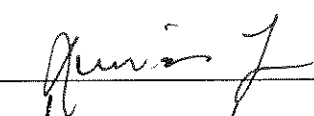
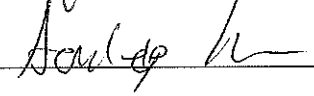
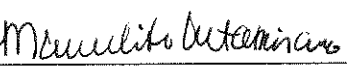




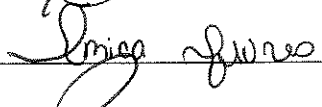

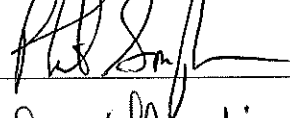
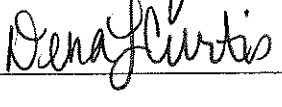



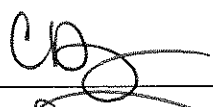

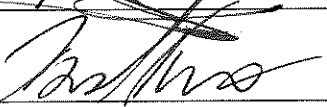

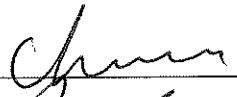
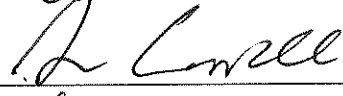
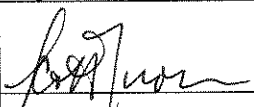
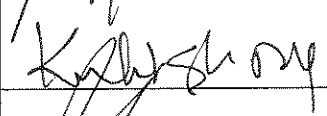
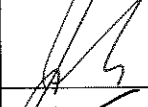

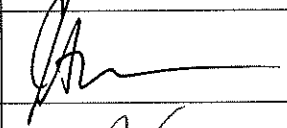
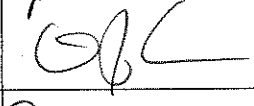

Printed Name	Signature	Address	Date
Elisa Biliou		5323 N. Tisha Ave. Fresno CA 93723	7.14.19
Roger Day		7206 W. MENLO AVE FRESNO, CA. 93723	7-24-19
Ryan Day		7162 W. SAN RAMON AVE Fresno, Calif. 93723	7-24-19
Seana Day		7206 W. MENLO AVE. FRESNO CA 93723	7-31-19
Amanda Francis		7260 W. San Ramon Fresno CA 93723	7.31.19
Shirley Lee	Shirley Lee	7335 W. San Bruno Ave Fresno, CA 93723	8/01/19
Justin Hickey		7335 W. San Bruno Ave FRESNO, CA 93723	
Frank Gibson		5187 N. TISHA FRESNO CA 93723	8/1/19
Barbir Kaur		5367 N. Madelyn Ave Fresno, CA 93723	8/1/19
Hilda Medrano		7417 W. SAN RAMON AVE. F/CA	8/1/19
CARLOS ARTIZ		7438 W. SAN RAMON AVE 93723	8/1/19
Ruby Marquez		7353 W. San Jose Ave	8/1/19
David Delgado		5232 N. Annapolis Ave.	8-1-19
Elizabeth Delgado		5232 N. Annapolis Ave	8-1-19
Ashleigh Garrett		5218 N. Phoenix Ave	8-1-19
Douglas McBee		5218 N. Phoenix Ave	8/01/19
Brenda McBee		5218 N. Phoenix Ave	8-1-19

Printed Name	Signature	Address	Date
GURPREET Toor	Gurpreet Toor	5922 N. La Ventana Ave Fresno CA 93723	8-1-19
Sukhdeep Sethi	Sukhdeep Sethi	3470 N. Gregory Ave Fresno CA 93722	8-1-19 \$40.00
GARY MANN		6809 W. Robinwood Fresno, CA 93723	
Bobby Dhalwal		5451 N. Sycamore Ave Fresno CA 93722	
Jay Sungu		11328 N. SAGEBERRY FRESNO, CA 93730	8-1-19
SANDEEP MEHTA		10865 N. WHITNEY AVE FRESNO CA 93730	8-1-19
Sarbjit Kaur	SLK	3337 W. Princeton Ave Fresno CA 93722	8-1-19
Romyjit Kaur		7840 N Gregory Ave Fresno CA 93722	
Rajwinder Kaur		7568 N Hanna. Ave 93722	
Parmjit Kaur		4618 W GRANT AVE 93722	
Aman Kaur	Aman Kaur	7562 N Sunriver DR. 93722	
GURINDERJIT Kaur	Gurinderjit Kaur	6078 N. TORREY PINES AVE, 93723	
Sharan Dhalwal		5897 W. Ramona Way Fresno, CA 93722	
Chetanjit Toor		6953 W. OSWEGO AVE FRESNO, CA 93723	
AJMER Mann		5547 Torrey Pines Fresno CA 93723	8-19
HARMAIL KHELA	Harmail Khela	6678 N. OLINDA AVE FRESNO CA 93722	8-1-19
GARY SIOBHAN		6083 N. Figsdale Dr #387 Fresno, CA 93722	8-1-19
ISH RAHURU	IR	4744 W CORNELL AVE	8-1-19

Printed Name	Signature	Address	Date
Tajinder Nijhar	T. Nijhar	536 West Normal Ave	8-1-19
KARN DEEPSAKH		4757 W. SPRUCE AVE #105	8-1-19
Sarbjit S. Deol		6609 W. Celeste Ave Kerman, CA 93630	8/1/19
Sunny Boparai	Sunny Boparai	5839 N. Sycamore Ave	8-1-19
GURJIT SINGH		5140 W. Michigan Ave	8-1-19
Gurvendra Singh		6649 W. Wrenwood Ln	8-1-19
Gurdev Singh	Gurdev S.	5438 N. Shiraz Ave	8-1-19
Jasvinder Singh		5458 N. Shiraz Ave	8-1-19
Vik Mann		5847 Torrey Pines Ave	8-1-19
GURBINDER S. DITHANAL		5951 N SYCAMORE FRESNO CA 93723	8-1-19
KULWANT K DITHANAL		5951 N SYCAMORE FRESNO	8-1-19
D.S. SAGHERA		5950 N SYCAMORE AVE FRESNO	8-1-19
GURCHARAN D. SINGH		5951 N SYCAMORE AVE FRESNO	8-1-19
INDERJIT KAUR		5951 N SYCAMORE AVE FRESNO	8-1-19

Printed Name	Signature	Address	Date
Brandon Camarena		5316 N. Madelyn Ave	7/19/19
Beverly Medina		Same as above	7/19/19
Manpreet Kaberwal		7440 W. San Bruno Ave. Fresno	7-19-19
ROB MELTON		7365 W San JOSE	7-19-19
Cathy Melton		7365 W. San Jose Ave	7-19-19
Marnie Camarena		5316 N Madelyn Ave	7/19/19
Sandra S. Shollen		5304 N. Madelyn Ave.	7/19/19
Cathy R Gonzales		5366 N San Clemente ⁹³²²³ Fresno	7/20/19
Denise Rangel		5350 N. TISHA AVE.	7/21/19
Shawna Hildebrand		5371 W Tisha Ave	7/21/19
HAL HILDBRAND		5371 N TISHA AVE	7/21/19
JEREMY DOTY		7338 W SAN JOSE AVE	7/21/19
Janel Ortiz		73233 W. San Jose Ave	7/21/19
Lupe Mendez		5265 N. Madelyn Ave	7/21/19
Guillermo Escobar		5265 N Madelyn Ave	7/21/19
RAVINDER SINGH		5277 N MADRYN AVE	7/21/19
Marcel Carbasa		5301 N Madelyn Ave	7/21/19
Raymond Laveria		Lucia Acres	7-21-19
Darvin Jones		7377 W San Jose Ave	7-21-19

Printed Name	Signature	Address	Date
Lisa Pierson		7340 W. San Ramon Ave.	7/22/19
Kemie Vaccaro		7113 W. Scott Ave.	7/22/19
Daniel Vaccaro		7113 W. Scott Ave	7/22/19
Robert Watkins		7424 W. San Bruno	7/22/19
Nancy Bluhm		7424 W. San Bruno	7/22/19
Claudia Galvez		5313 N. Madelyn Ave	7/22/19
Junior Lugo		7415 W. San Bruno	7/22/19
Sandy Kaur		7431 W. San Bruno Ave	7/22/19
Altamirano Manuelita		5313 W. Madelyn Ave.	7/22/19
Cathryn Wilkinson		7338 W. San Jose Ave	7/22/19
Damien Robles		7322 W. San Jose	7/23/19
Ray De la Cruz		7250 W. San Jose Ave.	7/23/19
JEDD INGRAM		7202 W. SAN JOSE AVE	07/23/2019
Erica Flores		7259 W. San Madele Ave	7/23/19
Paul Alaniz		7259 W. San Madele Ave	7/23/2019
Phil Gonzales		5366 W. San Clemente	7-24-19
Dena Curtis		7258 W. San Jose Ave	7-25-19
Marco A. Diori		7061 W. San Madele Ave	7/27/19

Printed Name	Signature	Address	Date
Christina Diez		5374 N Tisha Fresno 93723	7/27/19
Gustavo Diez		5374 N Tisha Fresno Ca 93723	7/27/19
Raymond Aquino		5335 N Tisha Ave Fresno CA 93723	7/27/19
Raul Trevino	Raul Trevino	5383 N. Tisha Ave Fresno, CA 93723	7/27/19
LYSSA TREVINO	E Trevino	11 11 11	11
Judith Haret	Judith Haret	5388 N Madelyn Ave Fresno, Ca 93723	7/27/19
Milani Salas		7198 W. San Bruno Fresno, CA 93723	7/28/19
Chayit Lu		7249 W San Jose Ave Fresno	7/28/19
Shawn Campbell		7250 W San Jose	7/28/19
Scott Wilson		5359 N. Tisha Ave.	7/28/19
Karlwant John		5343 N Madelyn Ave	7/29/19
John Lally		5355 N. Madelyn Ave	7/29/19
KARINA Vera		7495 W San Bruno Ave Fresno CA 93723	7/30/19
Jose Vera		7495 W San Bruno Ave Fresno CA 93723	7/30/19
DEAN'S KATHIRIN		7292 W SAN KATHON AVE Fresno CA 93723	7/29/19
Carolina Mora	Carli Mora	5866 N. Shiraz Fresno, CA 93723	7/31/19
MICHAEL SANTOYA		7292 W San Bruno Fresno 93723	7/31/19
Shirley Jackson	Shirley Jackson	7260 W. San Bruno	7/31/19



Fresno Metropolitan Flood Control District
Capturing Stormwater since 1956

File 420.214

August 1, 2019

Rodney Horton, Project Planner
City of Fresno
Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721

Dear Mr. Horton,

**Fresno Metropolitan Flood Control District Comments
on the City of Fresno Notice of Preparation of an
Environmental Impact Report and Scoping Meeting
for the Specific Plan of the West Area**

**Drainage Areas “EJ”, “EM”, “EN”, “AI”, “CD”, “EO”,
“AJ”, “CG”, “CH”, “CI”, “AK”, “AN”, “AL”, “AH” and “XX”**

This letter is in response to the City’s request for comments regarding the Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the Specific Plan of the West Area. Fresno Metropolitan Flood Control District (FMFCD) bears responsibility for storm water management within the Fresno-Clovis metropolitan area, including the area within the Plan boundary. Within this area, the community has developed and adopted Storm Drainage and Flood Control Master Plans as shown in the attached (Storm Drainage Master Plan Map). In general, each property contributes its pro-rata share to the cost of the public drainage system. All properties are required to participate in the community system for everyone. It is this form of participation in the cost and/or construction of the drainage system that will mitigate the impact of development. The subject property shall pay drainage fees pursuant to the Drainage Fee Ordinance prior to approval of any final maps and/or issuance of building permits at the rates in effect at the time of such approval. Please contact FMFCD for a final fee obligation prior to issuance of the construction permits within the Plan area.

The grading of proposed development within the Plan area shall be designed such that there are not adverse impacts to the passage of said major storm through that development. Additionally, the development shall provide any surface flowage easements or covenants for any portions of the development area that cannot convey storm water to public right of way without crossing private property.

If there are to be storm water discharges from the private facilities to FMFCD’s storm drainage system, they shall consist only of storm water runoff and shall be free of solids and debris. Landscape and/or area drains are not allowed to connect directly onto FMFCD’s facilities.

Rodney Horton
City of Fresno
Notice of Preparation of an EIR and
Scoping Meeting for the Specific Plan of the West Area
August 1, 2019
Page 2 of 3

FMFCD will need to review and approve the final improvement plans for all development (i.e. grading, street improvement and storm drain facilities) within the boundaries of the proposed project to insure consistency with the future Storm Drainage Master Plan.

Storm drain easements will be required whenever storm drain facilities are located on private property. No encroachments into the easement will be permitted including, but not limited to, foundations, roof overhangs, swimming pools, and trees.

Permanent drainage service is available in those areas where Master Plan facilities exist provided the developer can verify to the satisfaction of the City and FMFCD that runoff can be safely conveyed to existing the Master Plan facilities. Permanent drainage service will not be available if the downstream Master Plan facilities are not constructed or operational and in this instance FMFCD recommends the City require temporary drainage facilities until permanent drainage service is available. Prior to submitting any development proposal, it is recommended FMFCD be contacted for information regarding the status of the Master Plan drainage facilities and the availability of permanent drainage service.

In Master Plan areas where no drainage facilities have been constructed, the drainage plans can be revised to accommodate new land uses and pipe alignments that respect the City's Plan. For areas of the Plan that have existing drainage facilities and propose changing to land uses that generate more runoff than originally planned, some type of mitigation to accommodate the increased flow such as parallel pipes and/or on-site retention may be required. FMFCD has identified properties within the Plan area that may require some form of mitigation. (See the attached Potential Areas for Mitigation Map). Contact FMFCD to verify mitigation requirements that may apply to development.

FMFCD may require the developer to construct certain storm drain facilities as described in the Storm Drain Master Plan. The cost of construction of Master Plan facilities excluding dedication of storm drainage easements is eligible for credit against the drainage fee of the drainage area served by the facilities. A development agreement shall be executed with FMFCD to affect such credit. Reimbursement provisions, in accordance with the Drainage Fee Ordinance, will be included to the extent that developer's Master Plan costs for an individual drainage area exceed the fee of said area. Should the facilities cost for such individual development total less than the fee of said area, the difference shall be paid upon demand to the City or FMFCD.

Rodney Horton
City of Fresno
Notice of Preparation of an EIR and
Scoping Meeting for the Specific Plan of the West Area
August 1, 2019
Page 3 of 3

Within the Plan area there are no flood prone areas designated on the most current official Flood Insurance Rate Maps. However, it is responsibility of the developer to review and verify the information at the time of the development proposal. The official Flood Insurance Rate Maps are available at the Federal Emergency Management Agency (FEMA) Flood Map Service Center.

In an effort to improve storm runoff quality, outdoor storage areas shall be constructed and maintained such that material that may generate contaminants will be prevented from contact with rainfall and runoff and thereby prevent the conveyance of contaminants in runoff into the storm drain system.

FMFCD encourages, but does not require that roof drains from non-residential development be constructed such that they are directed onto and through a landscaped grassy swale area to filter out pollutants from roof runoff.

Runoff from areas where industrial activities, product, or merchandise come into contact with and may contaminate storm water must be directed through landscaped areas or otherwise treated before discharging it off-site or into a storm drain. Roofs covering such areas are recommended. Cleaning of such areas by sweeping instead of washing is to be required unless such wash water can be directed to the sanitary sewer system. Storm drains receiving untreated runoff from such areas that directly connect to FMFCD's system will not be permitted. Loading docks, depressed areas, and areas servicing or fueling vehicles are specifically subject to these requirements. FMFCD's policy governing said industrial site NPDES program requirements are available. Contact FMFCD's Environmental Department for further information regarding these policies related to industrial site requirements.

Thank you for your consideration of these comments and for allowing us to be a part of the Specific Plan process. We continue to look forward to working with you and the City of Fresno on the Plan process.

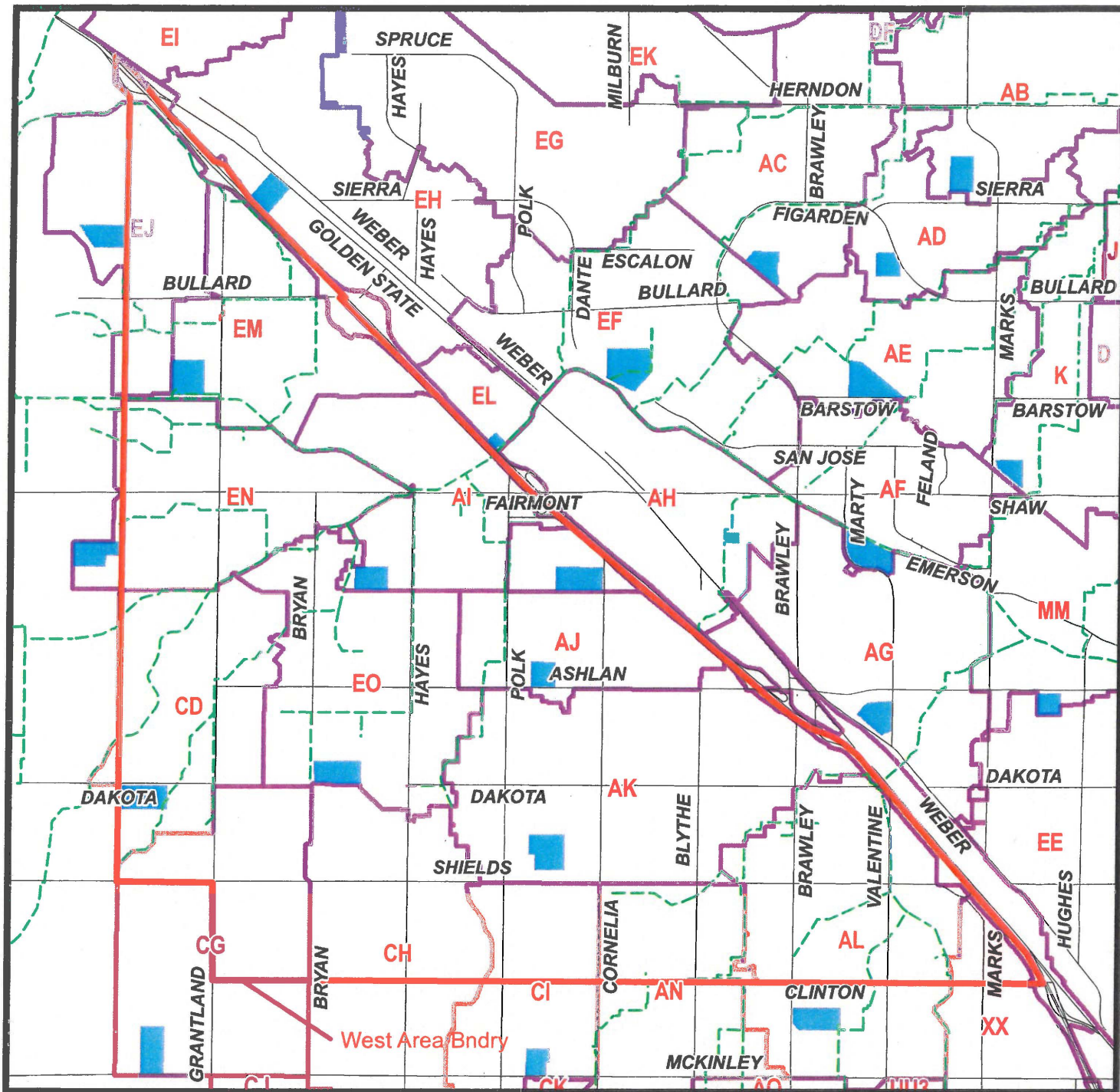
Very Truly Yours,



Wendell Lum
Master Plan Special Projects Manager

WL/lrl

Attachments



SYMBOL LEGEND

- | | | | |
|------------------------------|-----------------------------|-------------------------------------|---------------------------|
| PRIVATE INLET * | PRIVATE PIPE * | PARCELS | EXISTING TYPE "E" INLET |
| DESIGN INLET | DESIGN PIPE | EXISTING BASIN | PUMP STATION |
| EXISTING INLET | EXISTING PIPE | PROPOSED BASIN | EXISTING OUTFALL |
| EXISTING MANHOLE | FUTURE PIPE | DRAINAGE AREA | EXISTING TOP OF CURB ELEV |
| FUTURE INLET | FUTURE PIPE W/ CONTRACT | INLET BOUNDARY | FUTURE TOP OF CURB ELEV |
| FUTURE INLET W/ CONTRACT | NON MASTER PLAN FUTURE PIPE | LANDUSE BOUNDARY | EXISTING CURB |
| NON MASTER PLAN FUTURE INLET | | SPECIFIC PLAN OF WEST AREA BOUNDARY | |
- *Non-District Facilities

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

STORM DRAINAGE MASTER PLAN

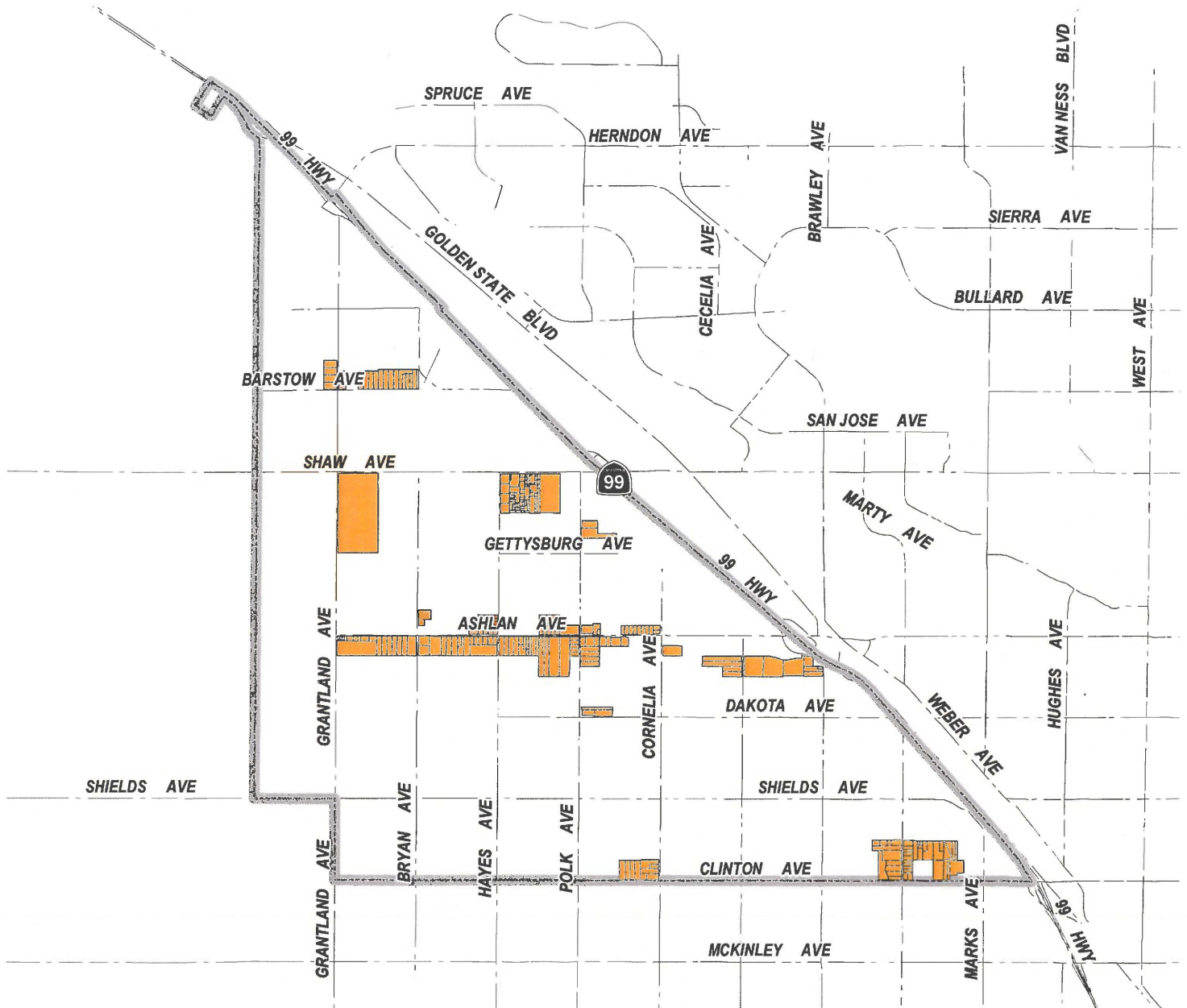
FRESNO COUNTY

CALIFORNIA



1" = 4000'

NOTE: THIS MAP IS SCHEMATIC.
DISTANCES, AMOUNT OF CREDITABLE
FACILITIES, AND LOCATION OF INLET
BOUNDARIES ARE APPROXIMATE.



LEGEND

 Potential Areas for Mitigation



1" = 5000'

Specific Plan of the West Area



POTENTIAL AREAS FOR MITIGATION FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: rickh
Date: 8/1/2019
Path: K:\Autocad\DWGS\0EXHIBIT\MITIGATION\West Specific Plan.mxd



SPECIFIC PLAN OF THE WEST AREA

SCOPING MEETING AGENDA

WEDNESDAY, JULY 24, 2019 - 6:00 PM

1. **Registration Period:** Attendees will sign in and give his/her name, association, address, and email. This information will be put on a mailing list for future mailings.
2. **Format:** Short Presentation and Open House
 - a. Brief Presentation: 6:00-6:15pm - A brief presentation will be provided at the beginning of the meeting. The presentation will provide an overview of the project, the purpose of the meeting, and opportunities for community input/participation during the environmental review process.
 - b. Open House: 6:15-7:30pm - Stations will be provided throughout the room with maps and information. Each station will be staffed with a Planner. The intent of each station is to provide you with an opportunity to review some materials, ask some questions, and provide some comments if desired.
3. **Questions/Comments:** De Novo Planning Group and City of Fresno staff will accept questions and comments concerning the project and scope of the EIR. The intent is to record comments/concerns so they can be addressed within the Draft EIR.

Please write any comment or concern regarding this project in the space provided below.

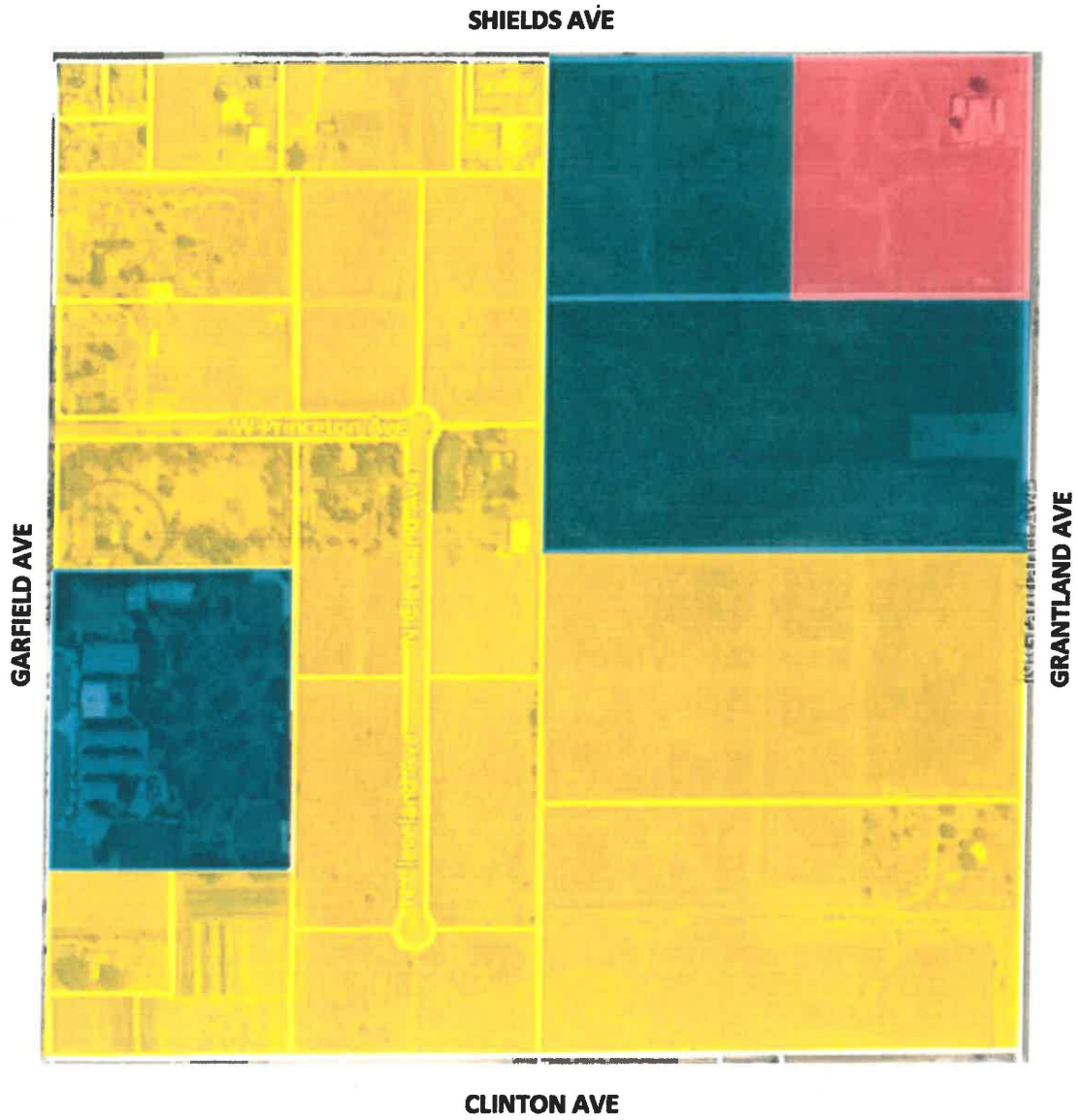
Re: 160 acres @ SW Corner of
W. Shields Ave and N. Grantland Ave.

I am interested in what land use
patterns will be used to analyze potential
environmental impacts for this area

This should be provided as an 'Exhibit'
within the Draft EIR document. An
example (Exhibit 'A') is attached to illustrate
proposed land use designations

Jeff Roberts
Committee Member

"Exhibit A"



Legend

-  Medium Low Density Residential
-  Commercial (Community)
-  Public Facility





Gavin Newsom
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Kate Gordon
Director

Notice of Preparation

June 28, 2019

To: Reviewing Agencies

Re: Specific Plan of the West Area
SCH# 2019069117

Attached for your review and comment is the Notice of Preparation (NOP) for the Specific Plan of the West Area draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Rodney Horton
Fresno, City of
2600 Fresno Street, Room 3065
Fresno, CA 93721

with a copy to the State Clearinghouse in the Office of Planning and Research at state.clearinghouse@opr.ca.gov. Please refer to the SCH number noted above in all correspondence concerning this project on our website: <https://ceqanet.opr.ca.gov/2019069117/2>.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

cc: Lead Agency

2019069117

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P. O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # _____

Project Title: Specific Plan of the West AreaLead Agency: City of Fresno, Development and Resources Mgmt. Dept.Contact Person: Rodney HortonMailing Address: 2600 Fresno Street, Room 3065Phone: (559) 621-2485City: FresnoZip: 93721County: FresnoProject Location: County: FresnoCity/Nearest Community: FresnoCross Streets: See NOPZip Code: 93721Lat. / Long.: 36 ° 47 ' 41.8 " N / 119 ° 53 ' 57.5 " WTotal Acres: 7,077Assessor's Parcel No.: See NOPSection: Various Twp.: 13S Range: 19E Base: MDBMWithin 2 Miles: State Hwy #: SR 99Waterways: San Joaquin RiverAirports: N/ARailways: UPRRSchools: See NOP

Document Type:

CEQA: ☒ NOP
☒ Early Cons
☐ Neg Dec
☐ Mit Neg Dec

☐ Draft EIR
☐ Supplement/Subsequent EIR
 (Prior SCH No.) JUN 28 2019
☐ Other _____

Governor's Office of Planning & Research

NEPA: ☐ NOI
☐ EA
☐ Draft EIS
☐ FONSI

Other: ☐ Joint Document
☐ Final Document
☐ Other _____

Local Action Type:

☐ General Plan Update
☒ General Plan Amendment
☐ General Plan Element
☐ Community Plan

☒ Specific Plan
☐ Master Plan
☐ Planned Unit Development
☐ Site Plan

☒ Rezone
☐ Prezone
☐ Use Permit
☐ Land Division (Subdivision, etc.)

☐ Annexation
☐ Redevelopment
☐ Coastal Permit
☐ Other _____

Development Type:

☒ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☒ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational _____
☒ Recreational _____

☐ Water Facilities: Type _____ MGD _____
☐ Transportation: Type _____
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☒ Other: See Table 2 of NOP

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☒ Economic/Jobs
☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities
☒ Other Green House Gas Emissions

☒ Recreation/Parks
☒ Schools/Universities
☒ Septic Systems
☒ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation

☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Wildlife
☒ Growth Inducing
☒ Land Use
☒ Cumulative Effects

Present Land Use/Zoning/General Plan Designation:

See NOP

Project Description: (please use a separate page if necessary)

The proposed Specific Plan will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 7,077-acre Plan Area. The Specific Plan would allow for the future development of residential and non-residential uses. The proposed land use plan also designates public facility uses that are currently existing within the Plan Area, including schools and churches. Additionally, the proposed land use plan would allow for approximately 248 acres of park, open space, and ponding basin uses. The Specific Plan also includes circulation and utility improvements, some of which are planned in the City's current program for capital improvements.

Note: The state Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

January 2008

NOP Distribution List

County: Fresno

SCH# 2019069117

Resources Agency

- ☒ **Resources Agency**
Nadell Gayou
 - ☐ **Dept. of Boating & Waterways**
Denise Peterson
 - ☐ **California Coastal Commission**
Allyson Hitt
 - ☐ **Colorado River Board**
Elsa Contreras
 - ☒ **Dept. of Conservation**
Crina Chan
 - ☐ **Cal Fire**
Dan Foster
 - ☒ **Central Valley Flood Protection Board**
James Herota
 - ☐ **Office of Historic Preservation**
Ron Parsons
- ☒ **Dept of Parks & Recreation**
Environmental Stewardship Section
 - ☐ **S.F. Bay Conservation & Dev't. Comm.**
Steve Goldbeck
 - ☐ **Dept. of Water Resources**
Resources Agency
Nadell Gayou

Fish and Wildlife

- ☐ **Depart. of Fish & Wildlife**
Scott Flint
Environmental Services Division
- ☐ **Fish & Wildlife Region 1**
Curt Babcock
- ☐ **Fish & Wildlife Region 1E**
Laurie Harnsberger
- ☐ **Fish & Wildlife Region 2**
Jeff Drongesen
- ☐ **Fish & Wildlife Region 3**
Craig Weightman

- ☒ **Fish & Wildlife Region 4**
Julie Vance
- ☐ **Fish & Wildlife Region 5**
Leslie Newton-Reed
Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6**
Tiffany Ellis
Habitat Conservation Program
- ☐ **Fish & Wildlife Region 6 I/M**
Heidi Calvert
Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Wildlife M**
William Paznokas
Marine Region

Other Departments

- ☐ **California Department of Education**
Lesley Taylor
- ☒ **OES (Office of Emergency Services)**
Monique Wilber
- ☐ **Food & Agriculture**
Sandra Schubert
Dept. of Food and Agriculture
- ☐ **Dept. of General Services**
Cathy Buck
Environmental Services Section
- ☐ **Housing & Comm. Dev.**
CEQA Coordinator
Housing Policy Division

Independent Commissions, Boards

- ☐ **Delta Protection Commission**
Erik Vink
- ☐ **Delta Stewardship Council**
Anthony Navasero
- ☐ **California Energy Commission**
Eric Knight

- ☒ **Native American Heritage Comm.**
Debbie Treadway
- ☒ **Public Utilities Commission**
Supervisor
- ☐ **Santa Monica Bay Restoration**
Guangyu Wang
- ☒ **State Lands Commission**
Jennifer Deleong
- ☐ **Tahoe Regional Planning Agency (TRPA)**
Cherry Jacques

Cal State Transportation Agency CalSTA

- ☐ **Caltrans - Division of Aeronautics**
Philip Crimmins
- ☐ **Caltrans - Planning**
HQ LD-IGR
Christian Bushong
- ☒ **California Highway Patrol**
Suzann Ikeuchi
Office of Special Projects

Dept. of Transportation

- ☐ **Caltrans, District 1**
Rex Jackman
- ☐ **Caltrans, District 2**
Marcelino Gonzalez
- ☐ **Caltrans, District 3**
Susan Zanchi
- ☐ **Caltrans, District 4**
Patricia Maurice
- ☐ **Caltrans, District 5**
Larry Newland
- ☒ **Caltrans, District 6**
Michael Navarro
- ☐ **Caltrans, District 7**
Dianna Watson
- ☐ **Caltrans, District 8**
Mark Roberts

- ☐ **Caltrans, District 9**
Gayle Rosander
- ☐ **Caltrans, District 10**
Tom Dumas
- ☐ **Caltrans, District 11**
Jacob Armstrong
- ☐ **Caltrans, District 12**
Maureen El Harake

Cal EPA

Air Resources Board

- ☒ **Airport & Freight**
Jack Wursten
 - ☐ **Transportation Projects**
Nesamani Kalandiyur
 - ☐ **Industrial/Energy Projects**
Mike Tollstrup
- ☐ **California Department of Resources, Recycling & Recovery**
Kevin Taylor/Jeff Esquivel
- ☐ **State Water Resources Control Board**
Regional Programs Unit
Division of Financial Assistance
- ☐ **State Water Resources Control Board**
Cindy Forbes - Asst Deputy
Division of Drinking Water
- ☐ **State Water Resources Control Board**
Div. Drinking Water # _____
- ☒ **State Water Resources Control Board**
Student Intern, 401 Water Quality Certification Unit
Division of Water Quality
- ☐ **State Water Resources Control Board**
Phil Crader
Division of Water Rights
- ☒ **Dept. of Toxic Substances Control Reg. # _____**
CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
Cathleen Hudson
North Coast Region (1)
- ☐ **RWQCB 2**
Environmental Document Coordinator
San Francisco Bay Region (2)
- ☐ **RWQCB 3**
Central Coast Region (3)
- ☐ **RWQCB 4**
Teresa Rodgers
Los Angeles Region (4)
- ☐ **RWQCB 5S**
Central Valley Region (5)
- ☒ **RWQCB 5F**
Central Valley Region (5)
Fresno Branch Office
- ☐ **RWQCB 5R**
Central Valley Region (5)
Redding Branch Office
- ☐ **RWQCB 6**
Lahontan Region (6)
- ☐ **RWQCB 6V**
Lahontan Region (6)
Victorville Branch Office
- ☐ **RWQCB 7**
Colorado River Basin Region (7)
- ☐ **RWQCB 8**
Santa Ana Region (8)
- ☐ **RWQCB 9**
San Diego Region (9)

☐ Other _____

☐ _____
Conservancy



SPECIFIC PLAN OF THE WEST AREA

SCOPING MEETING AGENDA

WEDNESDAY, JULY 24, 2019 - 6:00 PM

1. **Registration Period:** Attendees will sign in and give his/her name, association, address, and email. This information will be put on a mailing list for future mailings.
2. **Format:** Short Presentation and Open House
 - a. **Brief Presentation:** 6:00-6:15pm - A brief presentation will be provided at the beginning of the meeting. The presentation will provide an overview of the project, the purpose of the meeting, and opportunities for community input/participation during the environmental review process.
 - b. **Open House:** 6:15-7:30pm - Stations will be provided throughout the room with maps and information. Each station will be staffed with a Planner. The intent of each station is to provide you with an opportunity to review some materials, ask some questions, and provide some comments if desired.
3. **Questions/Comments:** De Novo Planning Group and City of Fresno staff will accept questions and comments concerning the project and scope of the EIR. The intent is to record comments/concerns so they can be addressed within the Draft EIR.

Please write any comment or concern regarding this project in the space provided below.

Traffic has increased tremendously on Ashlan due to the building of Harvest Elementary, Glacia & now the new high school. We can't get out of our yard in the early morning hours or afternoon hrs. when school is released or beginning. This should be studied.
Patricia and Clifford Upton
6117 W. Ashlan
Fresno, Ca 93723
559 275 6041

SPECIFIC PLAN OF THE WEST AREA

SCOPING MEETING AGENDA

WEDNESDAY, JULY 24, 2019 - 6:00 PM

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3. **Questions/Comments:** De Novo Planning Group and City of Fresno staff will accept questions and comments concerning the project and scope of the EIR. The intent is to record comments/concerns so they can be addressed within the Draft EIR.

Please write any comment or concern regarding this project in the space provided below.

- ① We would prefer that the City limits end on Grantland not on Garfield Ave
- ② we do not want Garfield Avenue opened up thru between Shaw Ave + Shields. It would destroy the safety and quietness of our neighborhood.
- ③ we do not want to be on poisoned chlorinated Fresno City water. Our well water is great and flavorful to drink.
- ④ we do not want light pollution brought into our neighborhood with street lights.
- ⑤ we do not want to be under the policies of Fresno City Council. We moved out of Fresno City in the 1970's to get away from city politics.

Dave Elmore
275-1618



July 15, 2019

Rodney Horton
City of Fresno
Development & Resource Management
2600 Fresno Street, Third Floor
Fresno 93721-3604

Project: NOP – Specific Plan of the West Area – SCH # 2019069117

District CEQA Reference No: 20190888

Dear Mr. Horton:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation for the above referenced project. The Specific Plan of the West Area (also known as "Specific Plan" or "West Area") encompasses approximately 7,077 acres in the City of Fresno city limits and unincorporated Fresno County (Project). Of the approximately 11 square miles within the Plan Area, 6.9 square miles are in the city limits and 4.1 square miles are in the growth area. The growth area is land outside the city limits but within the City's Sphere of Influence (SOI) boundary, which is the adopted limit for future growth. The Plan Area is located west of State Route 99 and bounded on the south by West Clinton Avenue and to the west by Grantland and Garfield Avenues. The Plan area includes the southwest portion of Highway City adjacent to State Route 99. The Specific Plan of the West Area (Plan) is a master level Project and, while Project-specific data may not be available until specific approvals are being granted, the Environmental Impact Report (EIR) should include a discussion of policies, which when implemented, will reduce or mitigate impacts on air quality at the individual project level. To aid the Lead Agency in addressing project specific issues at the program level the District offers the following comments and recommendations:

Land Use Planning

1. Nearly all development projects within the San Joaquin Valley Air Basin, from general plans to individual development projects have the potential to generate air pollutants, making it more difficult to attain state and federal ambient air quality standards. Land

Samir Sheikh

Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

use decisions are critical to improving air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence transportation needs and motor vehicle emissions are the largest source of air pollution. Land use decisions and project design elements such as preventing urban sprawl, encouraging mix-use development, and project designs that reduce vehicle miles traveled (VMT) have proven benefit for air quality. The District recommends that the Specific Plan include or incorporate by reference, policies that will reduce or mitigate VMT impacts to the extent feasible. VMT can be reduced through encouragement of mixed-use development, walkable communities, etc. Recommended design elements can be found on the District's website at:

<http://www.valleyair.org/ISR/ISROnSiteMeasures.htm>.

To aid agencies in addressing VMT impacts the District has prepared the following guidance documents: *Air Quality Guidelines for General Plans*, and *AB 170 Requirements for General Plans*. These documents provide general information and recommendations for policies that are effective in reducing impacts from growth and development projects. These documents are available on the District's web site at: http://www.valleyair.org/transportation/Guidelines_for_General_Plans.htm.

Emissions Analysis

- 1) At the federal level for the National Ambient Air Quality Standards (NAAQS), the District is currently designated as extreme nonattainment for the 8-hour ozone standards; nonattainment for the PM_{2.5} standards; and attainment for the 1-Hour ozone, PM₁₀ and CO standards. At the state level, the District is currently designated as nonattainment for the 8-hour ozone, PM₁₀, and PM_{2.5} California Ambient Air Quality Standards (CAAQS). The District recommends that the Air Quality section of an Environmental Impact Report (EIR) include a discussion of the following impacts:
 - a) **Criteria Pollutants:** Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions.
 - i) **Construction Emissions:** Construction emissions are short-term emissions and should be evaluated separately from operational emissions. For reference, the District's annual criteria thresholds of significance for construction are: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SO_x), 15 tons per year of particulate matter of 10 microns or less in size (PM₁₀), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM_{2.5}).
 - *Recommended Mitigation Measure if needed:* To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the Project to utilize off-road construction fleets that can

achieve fleet average emissions equal to or cleaner than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier III and above engine standards.

- ii) **Operational Emissions:** Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. For reference, the annual criteria thresholds of significance for operation of permitted and non-permitted sources each are: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5).
 - iii) **Recommended Model:** Project related criteria pollutant emissions from construction and operation non-permitted (limited to equipment not subject to District permits) should be identified and quantified. Emissions analysis should be performed using CalEEMod (**California Emission Estimator Model**), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.
- b) **Nuisance Odors:** The Project should be evaluated to determine the likelihood that the Project would result in nuisance odors. Nuisance odors are subjective, thus the District has not established thresholds of significance for nuisance odors. Nuisance odors may be assessed qualitatively taking into consideration of project design elements and proximity to off-site receptors that potentially would be exposed objectionable odors.
- c) **Health Risk Screening/Assessment:** A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TAC's are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) (<https://www.arb.ca.gov/toxics/healthval/healthval.htm>) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. Industry specific TACs generated must also be identified and quantified.

The District recommends the Project be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

- i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed. The prioritization calculator can be found at:
http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.
- ii) The District recommends a refined HRA for projects that result in a prioritization score of 10 or greater. It is recommended that the Project proponent contact the District to review the proposed modeling protocol. The Project would be considered to have a significant health risk if the HRA demonstrates that the project related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices.

Please provide the following information electronically to the District for review:

- HRA AERMOD model files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- The District can be contacted at (559) 230-6000 for assistance; or
- Visiting the District's website (Modeling Guidance) at http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm

- d) **Ambient Air Quality Analysis:** An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a Project will cause or contribute to a violation of the ambient air quality standards. The District recommends that an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

- 2) In addition to the discussions on potential impacts identified above, a preliminary review indicates that an EIR should be prepared, the District recommends the EIR also include the following discussions:
- a) A discussion of the methodology, model assumptions, inputs and results used in characterizing the Project's impact on air quality. To comply with CEQA requirements for full disclosure, the District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for any modeling referenced in the EIR.
 - b) A discussion of the components and phases of the Project and the associated emission projections, including ongoing emissions from each previous phase.
 - c) A discussion of Project design elements and mitigation measures, including characterization of the effectiveness of each mitigation measure incorporated into the Project.
 - i) The following policies/mitigation measures are recommended to reduce or mitigate impacts from criteria pollutant emissions:
 - (1) Use of off-road construction fleets that can achieve fleet average emissions equal to or less than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. The District recommends incorporating, as a condition of Project approval, a requirement that off-road construction equipment used on site achieve fleet average emissions equal to or less than the Tier III emissions standard of 4.8 NO_x g/hp-hr. This can be achieved through any combination of uncontrolled engines and engines complying with Tier III and above engine standards.
 - (2) For projects exceeding the applicability thresholds identified in Section 2.0 of District Rule 9510, a condition of Project approval requiring demonstration of compliance with Rule 9510, prior to the issuance of grading and/or building permits.
 - (3) For projects subject to District permitting requirements, demonstration of compliance with District Rule 2201, such as a copy of the Authority to Construct (ATC), before issuance of the first building permit, be made a condition of project approval.
 - ii) The following policies/mitigation measures are recommended to mitigate potential health impacts of individual projects:

- (1) Development projects resulting in toxic air contaminant emissions will be located an adequate distance from residential areas and other sensitive receptors in accordance to ARB's *Air Quality and Land Use Handbook: A Community Health Perspective*.
 - (2) A health risk screening and/or assessment will be performed to assess potential risks to sensitive receptors for the following projects:
 - (3) Projects whose proposed locations are within the established buffer distances identified in ARB's handbook;
 - (4) Projects whose land uses are not specifically identified in ARB's handbook (such as shopping centers), but there is sufficient information to reasonably conclude that sensitive receptors would be exposed to significant sources of toxic air contaminants; and
 - (5) Projects that would otherwise appear to be exempt from CEQA requirements, but there is sufficient information to reasonably conclude that sensitive receptors would be exposed to significant sources of toxic air contaminants, such as industrial use projects allowed by right.
- d) A discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's attainment status can be found online by visiting the District's website at:
<http://valleyair.org/aqinfo/attainment.htm>.

District Rules and Regulations

- 3) District Rule 9510 (Indirect Source Review) is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site fees.

Future individual development project(s) within the Project would be subject to District Rule 9510 if (1) upon full build-out the project would receive a project-level discretionary approval from a public agency and would equal or exceed any one of the applicability thresholds below for example, or (2) would equal or exceed any of the applicability thresholds in section 2.0 of the rule:

- 50 dwelling units
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;
- 20,000 square feet of medical office space;
- 39,000 square feet of general office space; or

- 9,000 square feet of educational space; or
- 10,000 square feet of government space; or
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above

District Rule 9510 also applies to any transportation or transit development projects where construction exhaust emissions equal or exceed two (2.0) tons of NO_x or two (2.0) tons of PM₁₀.

In the case the individual development project(s) are subject to District Rule 9510, an Air Impact Assessment (AIA) application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval. Information about how to comply with District Rule 9510 can be found online at: <http://www.valleyair.org/ISR/ISRHome.htm>. The AIA application form can be found online at: <http://www.valleyair.org/ISR/ISRFormsAndApplications.htm>.

District staff is available to provide assistance with determining if future individual development projects will be subject to Rule 9510, and can be reached at (559) 230-6000 or by email at ISR@valleyair.org.

- 4) Particulate Matter 2.5 microns or less in size (PM_{2.5}) from under-fired charbroilers pose immediate health risk. Since the cooking of meat can release carcinogenic PM_{2.5} species like polycyclic aromatic hydrocarbons, controlling emissions from under-fired charbroilers will have a substantial positive impact on public health.

Charbroiling emissions occur in populated areas, near schools and residential neighborhoods, resulting in high exposure levels for sensitive Valley residents. The air quality impacts on neighborhoods near restaurants with under-fired charbroilers can be significant on days when meteorological conditions are stable, when dispersion is limited and emissions are trapped near the surface within the surrounding neighborhoods. This potential for neighborhood-level concentration of emissions during evening or multi-day stagnation events raises environmental concerns.

Furthermore, the latest photochemical modeling indicates that reducing commercial charbroiling emissions is critical to achieving attainment of multiple federal PM_{2.5} standards and associated health benefits in the Valley.

Therefore, the District strongly recommends new restaurants that will operate under-fired charbroilers install emission control systems during the construction phase since installing charbroiler emissions control systems during construction of new facilities is likely to result in substantial economic benefit compared to costly retrofitting. To ease the financial burden for Valley businesses that wish to install control equipment before it is required by District Rule 4692 (Commercial Charbroiling), the District is currently offering substantial incentive funding that covers the full cost of purchasing, installing,

and maintaining the system for up to two years. Please contact the District at (559) 230-5800 or technology@valleyair.org for more information.

- 5) Future individual development projects may also be subject to District regulations including, but limited to: Regulation VIII (Fugitive PM10 Prohibitions), District Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 4002 (National Emission Standards for Hazardous Air Pollutants), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). To avoid potential delays in project development, the District strongly encourages project proponents to contact the District's Small Business Assistance (SBA) Office early in the planning phase to discuss whether an Authority to Construct (ATC) and Permit to Operate (PTO) are required, and to identify other District rules or regulations that apply to their project.

The District recommends that a mitigation measure be included that requires, for any project within the scope of this EIR that is subject to District permits, demonstration of compliance with District permitting requirements, such as a copy of the ATC, before issuance of the first building permit, be made a condition of project approval.

- 6) Future individual development Project may be subject to District Rule 9410 (Employer Based Trip Reduction) if the Project would result in employment of 100 or more "eligible" employees. District Rule 9410 requires employers with 100 or more "eligible" employees at a worksite to establish an Employer Trip Reduction Implementation Plan (eTRIP) that encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. Under an eTRIP plan, employers have the flexibility to select the options that work best for their worksites and their employees. Information about how District Rule 9410 can be found online at: www.valleyair.org/tripreduction.htm. For additional information, you can contact the District by phone at 559-230-6000 or by e-mail at etrip@valleyair.org
- 7) The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888. Current District rules can be found online at the District's website at: www.valleyair.org/rules/1ruleslist.htm.

The District recommends that a copy of the District's comments be provided to the Project proponent.

If you have any questions or require further information, please call Georgia Stewart at (559) 230-5937 or email Georgia.Stewart@valleyair.org. When calling or emailing the District, please reference District CEQA number 20190888.

Sincerely,

Arnaud Marjollet
Director of Permit Services

A handwritten signature in blue ink, appearing to read 'Brian Clements', with a long horizontal flourish extending to the right.

Brian Clements
Program Manager

AM: gs



NOTICE OF PREPARATION

FOR THE

SPECIFIC PLAN OF THE WEST AREA

JULY 2019

Prepared for:



Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
(559) 621-2485

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818



D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



NOTICE OF PREPARATION

FOR THE

SPECIFIC PLAN OF THE WEST AREA

JULY 2019

Prepared for:



Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
(559) 621-8003

Prepared by:

De Novo Planning Group
1020 Suncoast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

DATE: July 2, 2019

To: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

SUBJECT: Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the Specific Plan of the West Area

LEAD AGENCY: City of Fresno, Development and Resources Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
(559) 621-2485

PROJECT PLANNER: Rodney Horton
rodney.horton@fresno.gov
(559) 621-8181

PURPOSE OF NOTICE

This is to notify public agencies and the general public that the City of Fresno, as the Lead Agency, will prepare an Environmental Impact Report (EIR) for the Specific Plan of the West Area. The City of Fresno is interested in the input and/or comments of public agencies and the public as to the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project, and public input. Responsible/trustee agencies will need to use the EIR prepared by the City of Fresno when considering applicable permits, or other approvals for the proposed project.

COMMENT PERIOD

Consistent with the time limits mandated by State law, your input, comments or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 PM, August 2, 2019.

Please send your comments/input (including the name for a contact person in your agency) to: Attn: Rodney Horton at the City of Fresno, 2600 Fresno Street, Room 3065, Fresno, CA 93721; or by e-mail to rodney.horton@fresno.gov.

SCOPING MEETING

On July 24, 2019, the City of Fresno will conduct a public scoping meeting to solicit input and comments from public agencies and the general public on the proposed project and scope of the EIR. This meeting will be held at the Glacier Point Middle School, Cafeteria, located at 4055 N. Bryan Avenue, Fresno, CA 93722, from 6:00 PM to 7:30 PM.

This meeting will be an open house format and interested parties may drop in to review the proposed project exhibits and submit written comments at any time between 6:00 PM and 7:30 PM. Representatives from the City of Fresno and the EIR consultant will be available to address questions regarding the EIR process and scope. Members of the public may provide written comments throughout the meeting.

If you have any questions regarding the scoping meeting, contact Rodney Horton, Project Planner, at (559) 621-8181 or rodney.horton@fresno.gov.

PROJECT LOCATION

The Specific Plan of the West Area (also-known-as “Specific Plan” or “West Area”) encompasses approximately 7,077 acres (or a little more than 11 square miles) in the City of Fresno city limits and unincorporated Fresno County. The footprint of the Specific Plan is referred to as the “Plan Area.” Of the eleven square miles within the Plan Area, 6.9 square miles are in the city limits and 4.1 square miles are in the growth area. The growth area is land outside the city limits but within the City’s Sphere of Influence (SOI) boundary, which is the adopted limit for future growth.

The Plan Area is triangular in shape and located west of State Route 99. It is bounded on the south by West Clinton Avenue, and to the west by Grantland and Garfield Avenues. The Plan Area includes the southwest portion of Highway City adjacent to State Route 99. See Figure 1 for the regional location map and Figure 2 for the Plan Area vicinity map.

PROJECT SETTING

EXISTING SITE CONDITIONS

The Plan Area is relatively flat with natural gentle slope near State Route 99. The Plan Area topography ranges in elevation from approximately 283 to 315 feet above mean sea level. A significant amount of land in the Plan Area is farmland or rural residential lots with large, uneven, and underutilized parcels. The West Area has approximately 3,070.95 acres of land that is classified as Urban and Built-Up, according to the State Department of Conservation. Prime farmland is principally located outside of the Plan Area. The West Area has 285.65 acres of Farmland of Statewide Importance which is located primarily in the western edge of the Plan Area. Approximately 509.39 acres of Unique Farmland is located within the Plan Area, most of which is within the southwest portion of the Plan Area. Farmland of Local Importance is located throughout the entire Plan Area, and totals approximately 1,562.82 acres. Vacant or Disturbed Land and Rural Residential Land account for approximately 1,650.17 acres within the growth area. See Figure 3 for an aerial view of the Plan Area.

SURROUNDING LAND USES

Surrounding land uses include State Route 99, the unincorporated communities of Herndon, Highway City, and Muscatel, and incorporated areas of the City of Fresno to the north (including mostly industrial uses), incorporated areas of the City of Fresno to the east (also including mostly industrial uses), unincorporated Fresno County and incorporated areas of the City of Fresno to the south (including farmland uses, rural residential uses, low density residential uses, and underutilized parcels) and unincorporated Fresno County to the west (including farmland and rural residential uses).

EXISTING LAND USES AND ZONING

A portion of the Plan Area is located within the City of Fresno city limits, and a portion is within unincorporated Fresno County (but within the City's SOI). The City of Fresno General Plan designates the Plan Area as: Low Density Residential, Medium Low Density Residential, Medium Density Residential, Urban Neighborhood Residential, High Density Residential, Community Commercial, General Commercial, Recreation Commercial, Office, Business Park, Light Industrial, Corridor/Center Mixed Use, Regional Mixed Use, Community Park, Open Space – Ponding Basin, Neighborhood Park, Open Space, Public/Quasi-Public Facility, Special School, Elementary School, Elementary, Middle & High School, and High School. See Figure 4 for the existing City General Plan land use designations.

The City of Fresno Zoning Map provides zoning for those portions of the Plan Area located within the city limits, but not for areas within the unincorporated County. Zoning designations are generally consistent with the existing General Plan land uses. The City zoning designations for the Plan Area include: Residential Estate (RE), Residential Single-Family, Extremely Low Density (RS-1), Residential Single-Family, Very Low Density (RS-2), Residential Single-Family, Low Density (RS-3), Residential Single-Family, Medium Low Density (RS-4), Residential Single-Family, Medium Density (RS-5), Residential Multi-Family, Medium High Density (RM-1), Residential Multi-Family, Urban Neighborhood (RM-2), Residential Multi-Family, High Density (RM-3), Mobile Home Park (RM-MH), Commercial Community (CC), Commercial General (CG), Commercial Regional (CR), Commercial Recreation (CRC), Light Industrial (IL), Corridor/Center Mixed Use (CMX), Neighborhood Mixed Use (NMX), Regional Mixed Use (RMX), Business Park (BP), Office (O), Open Space (OS), and Park and Recreation (PR). See Figure 5 for the existing zoning designations.

The Fresno County Zoning Map designates the portions of the Plan Area outside the city limits as: Rural Commercial Center (RCC), Central Trading (C4), General Commercial (C6), Light Industrial (M1), Exclusive Agricultural (AE20), Limited Agricultural (AL20), Rural Residential (RR), Single Family Residential Agricultural (RA), Single Family Residential (12,500) (R1B), and Trailer Park Residential (TP). Upon a proposal to annex unincorporated land into the city limits, the City of Fresno would prezone the land to a zone that is consistent with the General Plan land use. Once annexation occurs, the County zoning would not apply to the parcel.

PROJECT GOALS AND OBJECTIVES

Consistent with the California Environmental Quality Act (CEQA), Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed project shall be discussed. The objectives of the proposed project include future development of land for a wide variety of land uses including: Low Density Residential, Medium Low Density Residential, Medium Density Residential, Medium High Density Residential, Urban Neighborhood Residential, High Density Residential, Community Commercial, Recreation Commercial, General Commercial, Regional Commercial, Office, Business Park, Light Industrial, Corridor/Center Mixed Use, Regional Mixed Use, Pocket Park, Neighborhood Park, Community Park, Open Space, Ponding Basin, Public Facility, Church, Special School, Elementary School, Elementary, Middle & High School, High School, and Fire Station uses, as well as the required transportation and utility improvements.

Other objectives and purposes of the Specific Plan are summarized as follows:

- Accommodate and improve roadway access, connectivity and mobility among all modes of transportation, and prioritize roadway widening where bottlenecking exists.
- Accommodate planned transit services in the West Area by locating routes near or adjacent to the community centers, schools, parks, and retail centers.
- Provide a complete, safe, and well-maintained sidewalk network from residential neighborhoods to commercial centers, schools, parks, and community centers.
- Provide a complete, safe, and well-maintained roadway network that allows for efficient and smooth access from the West Area to other sections of the City and region.
- Create parks that are within existing and planned neighborhoods that are easily accessed by community members using pedestrian and bicycle pathways, transit services, or motor vehicles, consistent with the City of Fresno's Parks Master Plan.
- Provide for the location of a flagship Regional Park in the Plan Area that has components of the Plan Area's agricultural history through the planting of drought-resistant vegetation or trees, and the creation of public art that exhibits the Plan Area's contribution to the agricultural industry.
- Incorporate elements of agriculture in future parks by planting a mixture of native drought tolerant vegetation, shrubs, and trees that can serve to provide shade and enhance the streetscape.
- Encourage and provide land use opportunities for agri-tourism ventures to occur in the West Area.
- Encourage the development of harvest – producing community gardens.
- Attract desired and needed local retail establishments to serve the needs of the West Area community. Such establishments include grocery stores, bakeries, restaurants other than fast food places, and boutiques.
- Discourage the expansion of undesirable retail establishments such as liquor stores, tobacco and vapor stores, short-term loan and pawn shops, and adult stores.
- Encourage the development of retail establishments along commercial corridors.

- Encourage the orderly and consistent development of civic, parkland, retail and commercial, mixed-use, and multi-family uses along West Shaw Avenue, West Ashlan Avenue, Veterans Boulevard, West Shields Avenue, West Clinton Avenue, and Blythe Avenue.
- Encourage a variety of housing types and styles.
- Encourage the development of housing to accommodate an aging population including, multi-generational houses and other elder housing options.
- Reaffirm the City's commitment and obligation to affirmatively further access to fair and affordable housing opportunities by strongly encouraging equitable and fair housing opportunities to be located in strategic proximity to employment, recreational facilities, schools, neighborhood commercial areas, and transportation routes.
- Attract much needed educational opportunities for the residents of the West Area, especially for post-secondary education, and access to programs for life-long learners.
- Provide for safe routes to schools for children, with the City and County working together with residents, to provide sidewalks in neighborhood that have sporadic access.
- Work to promote Neighborhood Watch in all neighborhoods, and further assess the need for the location of emergency response facilities west of State Route 99.

PROJECT CHARACTERISTICS AND DESCRIPTION

BACKGROUND

The proposed Specific Plan process officially started in September 2017 with the drafting of the existing conditions report. That document provides a detailed overview of the existing land uses within the Plan Area. Outreach to the West Area community started in early 2018 with individual meetings between City staff and community stakeholders, including residents, local agencies, institutional partners, elected officials, land owners, and developers. Public outreach included community stakeholder interviews, Steering Committee orientation sessions and meetings, community meetings and workshops, and an on-line survey.

The 11-member Steering Committee, established in March 2018 by the Fresno City Council, held regular public meetings to provide recommendations to the draft land use map and guiding principles based on input received from community members. Additionally, approximately 25 community stakeholders were interviewed from January 2018 to April 2018. Next, a kick-off survey regarding the Plan Area was released in April 2018. The survey covered topics such as quality of life, needed improvements, needed housing and commercial development, agri-tourism, and the overall future vision for the Plan Area. Two community conversations (i.e., workshops) were also held in order to receive feedback: Community Conversation No. 1 was held in May 2018, and Community Conversation No. 2 was held in June 2018. The Steering Committee then held meetings in June, July, August, November, and January 2018 in order to review and select the conceptual land use options. The draft land use map and guiding principles were released to the public on November 28, 2018. The draft land use map was then amended by the Steering Committee in January 2019. Lastly, an agri-tourism workshop was held in the spring of 2019.

INTRODUCTION

The proposed Specific Plan will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 7,077-acre Plan Area. The Specific Plan will serve as a bridge between the Fresno General Plan and individual development applications in the Plan Area.

The Specific Plan of the West Area seeks to provide for the orderly and consistent development that promotes and establishes the West Area as a complete neighborhood with enhanced transportation infrastructure, development of core commercial centers, creation of additional parkland, and encouraging the development of a diverse housing stock. The Plan Area does not currently have needed commercial amenities, forcing residents to travel east of State Route 99 for retail services. The Plan Area also lacks a complete roadway network and parkland.

LAND USE MAP AND MAXIMUM BUILDOUT POTENTIAL

The proposed Specific Plan refines the General Plan's land use vision for the West Area. The draft land use map proposes the relocation of higher density land uses away from the most western and southwestern portions of the Plan Area where they are distant from public transit and community amenities and transfers those higher density land use designations to major corridors. The Specific Plan of the West Area land use plan utilizes the City's existing General Plan land use designations to maintain or re-designate some parcels in the West Area. Some of the designation changes include: Low Density Residential (1 to 3.5 dwelling units per acre [DU/AC]), Medium Low Density Residential (3.5 to 6 DU/AC), Medium Density Residential (5 to 12 DU/AC), Medium High Density Residential (12 to 16 DU/AC), Urban Neighborhood Residential (16 to 30 DU/AC), High Density Residential (30 to 45 DU/AC), Community Commercial (1.0 maximum floor-area-ratio [FAR]), Recreation Commercial (0.5 maximum FAR), General Commercial (2.0 maximum FAR), Regional Commercial (1.0 maximum FAR), Office (2.0 maximum FAR), Business Park (1.0 maximum FAR), Light Industrial (1.0 maximum FAR), Corridor/Center Mixed Use (16 to 30 UD/AC and 1.5 maximum FAR), Regional Mixed Use (30 to 45 UD/AC and 2.0 maximum FAR), Pocket Park, Neighborhood Park, Community Park, Open Space, Ponding Basin, Public Facility, Church, Special School, Elementary School, Elementary, Middle & High School, High School, and Fire Station. See Table 1 for a summary of the existing and proposed land uses within the city limits, growth area, and Plan Area. See Figure 6 for the proposed General Plan land use designations.

As previously indicated, the City of Fresno Zoning Map designates the Plan Area as: RE, RS-1, RS-2, RS-3, RS-4, RS-5, RM-1, RM-2, RM-3, RM-MH, CC, CG, CR, CRC, IL, CMX, NMX, RMX, BP, O, OS, and PR. The Fresno County Zoning Map designates the portions of the Plan Area outside the city limits as: RCC, C4, C6, M1, AE20, AL20, RR, RA, R1B, and TP. In conjunction with the approval of the Specific Plan, the parcels in the City which would have a changed land use designation as a result of the Specific Plan would be rezoned to the corresponding City zoning designation.

TABLE 1: PARCEL ACREAGES BY LAND USE CLASSIFICATION FOR GENERAL PLAN AND PROPOSED SPECIFIC PLAN

GENERAL PLAN LAND USE DESIGNATIONS	CITY LIMITS			GROWTH AREA			PLAN AREA TOTAL		
	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	DIFFERENCE IN CITY	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	DIFFERENCE IN GROWTH AREA	GENERAL PLAN ACRES	SPECIFIC PLAN ACRES	OVERALL CHANGE
Low	146.20	95.82	- 163.47	671.59	420.76	- 143.64	817.79	516.57	- 307.11
Medium Low	582.37	821.03		243.59	635.94		825.97	1,456.98	
Medium	1,460.88	1,240.70		896.13	824.67		2,357.00	2,065.37	
Medium High	261.09	224.31		88.33	51.24		349.42	275.55	
Urban Neighborhood	214.65	96.53		213.96	75.11		428.61	171.64	
High	28.00	51.33		37.76	0.00		65.76	51.33	
<i>Subtotal - Residential</i>	<i>2,693.19</i>	<i>2,529.72</i>		<i>2,151.36</i>	<i>2,007.72</i>		<i>4,844.55</i>	<i>4,537.44</i>	
Community	81.87	27.40	- 40.68	56.79	25.34	+ 36.56	138.66	52.74	- 4.11
Recreation	41.34	41.34		0.00	0.00		41.34	41.34	
General	141.59	155.38		1.63	65.40		143.21	220.78	
Regional	0.00	0.00		0.00	4.24		0.00	4.24	
<i>Subtotal - Commercial</i>	<i>264.80</i>	<i>224.12</i>		<i>58.42</i>	<i>94.98</i>		<i>323.21</i>	<i>319.10</i>	
Office	7.51	42.94	+ 32.91	0.00	45.87	+ 26.92	7.51	88.81	+ 59.84
Business Park	22.71	20.57		54.40	35.45		77.11	56.02	
Light Industrial	33.13	32.75		0.00	0.00		33.13	32.75	
<i>Subtotal - Employment</i>	<i>63.35</i>	<i>96.26</i>		<i>54.40</i>	<i>81.32</i>		<i>117.75</i>	<i>177.59</i>	
Neighborhood	0.00	211.12	+ 114.60	0.00	44.83	+ 69.06	0.00	255.95	+ 183.66
Corridor/Center	106.19	71.78		0.00	24.23		106.19	96.00	
Regional	144.72	82.61		0.00	0.00		144.72	82.61	
<i>Subtotal - Mixed Use</i>	<i>250.90</i>	<i>365.50</i>		<i>0.00</i>	<i>69.06</i>		<i>250.90</i>	<i>434.56</i>	
Pocket Park	2.45	1.55	+ 24.58	0.00	0.00	+ 14.49	2.45	1.55	+ 10.09
Neighborhood Park	36.67	39.22		47.04	47.04		83.71	86.26	
Community Park	24.20	24.20		13.98	0.00		38.18	24.20	
Regional Park	0.00	0.00		0.00	0.00		0.00	0.00	
Open Space	5.03	5.03		1.76	1.76		6.79	6.79	
Ponding Basin	67.06	89.99		40.12	39.60		107.18	129.59	
<i>Subtotal - Open Space</i>	<i>135.41</i>	<i>159.99</i>		<i>102.90</i>	<i>88.41</i>		<i>238.31</i>	<i>248.40</i>	
Public Facility	4.98	12.64	+ 32.05	16.81	14.78	+ 25.59	21.78	27.42	+ 57.65
Church	9.93	21.20		1.66	34.60		11.59	55.80	
Special School	4.50	4.50		13.88	13.88		18.38	18.38	
Elem. School	56.18	66.17		25.65	25.65		81.82	91.82	
Elem./Middle/High School	145.37	145.37		0.00	0.00		145.37	145.37	
High School	46.95	46.95		0.00	0.00		46.95	46.95	
Fire Station	0.20	3.32		5.32	0.00		5.52	3.32	
<i>Subtotal - Public Facilities</i>	<i>268.10</i>	<i>300.15</i>		<i>63.32</i>	<i>88.91</i>		<i>331.41</i>	<i>389.06</i>	
Grand Total	3,675.75	3,675.75	--	2,430.39	2,430.39	--	6,106.14	6,106.14	--

The parcels that are currently within the County will not be rezoned. Instead, upon a proposal to annex unincorporated land into the city limits, the City of Fresno would prezone the land to a zone that is consistent with the General Plan land use. Once annexation occurs, the County zoning would not apply to the parcel.

Table 2 summarizes the acreages of each land use, the maximum number of units, and the maximum non-residential square footage that would be allowed under the proposed Specific Plan.

TABLE 2: MAXIMUM DEVELOPMENT POTENTIAL WITHIN SPECIFIC PLAN OF THE WEST AREA

GENERAL PLAN LAND USE DESIGNATIONS (AND DENSITY/INTENSITY)	SPECIFIC PLAN ACRES	MAXIMUM DEVELOPMENT POTENTIAL	
		DWELLING UNITS	NON-RESIDENTIAL SF
Low (1-3.5 DU/AC)	516.57	1,807	--
Medium Low (3.5-6 DU/AC)	1,456.98	8,741	--
Medium (5-12 DU/AC)	2,065.37	24,784	--
Medium High (12-16 DU/AC)	275.55	4,408	--
Urban Neighborhood (16-30 DU/AC)	171.64	5,149	--
High (30-45 DU/AC)	51.33	2,309	--
<i>Subtotal - Residential</i>	<i>4,537.44</i>	<i>47,199</i>	<i>--</i>
Community (1.0 Max. FAR)	52.74	--	2,297,354.40
Recreation (0.5 Max. FAR)	41.34	--	900,385.20
General (2.0 Max. FAR)	220.78	--	19,234,353.60
Regional (1.0 Max. FAR)	4.24	--	184,694.40
<i>Subtotal - Commercial</i>	<i>319.10</i>	<i>--</i>	<i>22,616,787.60</i>
Office (2.0 Max. FAR)	88.81	--	--
Business Park (1.0 Max. FAR)	56.02	--	--
Light Industrial (1.0 Max. FAR)	32.75	--	--
<i>Subtotal - Employment</i>	<i>177.59</i>	<i>--</i>	<i>--</i>
Neighborhood (12-16 DU/AC; 1.5 Max. FAR)	255.95	4,095	16,723,773.00
Corridor/Center (16-30 UD/AC; 1.5 Max. FAR)	96.00	2,880	6,272,640.00
Regional (30-45 UD/AC; 2.0 Max. FAR)	82.61	3,717	7,196,983.20
<i>Subtotal - Mixed Use</i>	<i>434.56</i>	<i>10,692</i>	<i>30,193,396.20</i>
Pocket Park	1.55	--	--
Neighborhood Park	86.26	--	--
Community Park	24.20	--	--
Regional Park	0.00	--	--
Open Space	6.79	--	--
Ponding Basin	129.59	--	--
<i>Subtotal - Open Space</i>	<i>248.40</i>	<i>--</i>	<i>--</i>
Public Facility	27.42	--	--
Church	55.80	--	--
Special School	18.38	--	--
Elem. School	91.82	--	--
Elem./Middle/High School	145.37	--	--
High School	46.95	--	--
Fire Station	3.32	--	--
<i>Subtotal - Public Facilities</i>	<i>389.06</i>	<i>--</i>	<i>--</i>
Grand Total	6,106.14	57,891 DU	52,810,183.80 SF

As shown in the table, the Specific Plan would allow for the future development of up to 57,891 DU (including 47,199 DU in the residential category and 10,692 DU in the mixed use category) and 52,810,183.80 SF of non-residential uses. The proposed land use plan also designates public facility uses that are currently existing within the Plan Area, including schools and churches. In the northern portion of the Plan Area, Fire Station No. 18 is located off of West Bullard Avenue at 5938 North La Ventana Avenue. Fire Station 18 will be relocated to a permanent location on

the south side of the 6000 block of West Shaw Avenue to maximize the department's "4 Minutes to Excellence" response time goal. Additionally, the proposed land use plan would allow for approximately 248 acres of park, open space, and ponding basin uses. The Specific Plan also includes circulation and utility improvements, some of which are planned in the City's current program for capital improvements.

The Specific Plan is designed to provide flexibility, so there is an extensive number of hypothetical variations/combinations for residential and non-residential development. However, the data within the above table represents the maximum density allowed without an amendment approved by the City. In effect, this is very likely an overestimate of what will actually be developed, but for purposes of environmental analysis in the EIR it represents the worst-case scenario.

It is noted that the proposed Specific Plan would amend the land uses for approximately half of the land within the Plan Area. The remaining parcels would maintain their existing land use and zoning designations. The parcels that are proposed for change by the proposed land use map are shown in Figure 7.

REVISIONS TO CORE GOALS

In addition to the proposed land use plan, the following are revisions to the core goals provided in the General Plan for the West Area:

1. West Shaw Avenue Town Center: The West Shaw Avenue Town Center (the Town Center) will extend from State Route 99 to the east side of Grantland Avenue and is envisioned to be comprised of mixed-use development supported by enhanced transit service. Land on the south side of West Shaw Avenue will provide additional neighborhood and commercial mixed-use opportunities.
2. Catalytic Corridors: The proposed Specific Plan designates higher density land uses along corridors for the purpose of providing easy access to major arterials and streets, retail centers, and community amenities. Catalytic corridors will include transit services. The corridors are designed to include neighborhood and pocket parks, commercial and retail uses, educational facilities, multi-family dwelling units, and professional offices. The corridors are located on the following streets:
 - a) West Shaw Avenue, from State Route 99 to the east side of Grantland Avenue;
 - b) West Ashlan Avenue, from State Route 99 to the commercial nodes located on the west side of Grantland Avenue;
 - c) North Blythe Avenue, from West Shields to West Ashlan Avenue;
 - d) West Clinton Avenue from State Route 99 to North Brawley Avenue; and
 - e) Veterans Boulevard, from West Gettysburg Avenue to West Barstow Avenue.

PROJECT ALTERNATIVES

CEQA requires that an EIR analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that

requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must “set forth only those alternatives necessary to permit a reasoned choice.” (CEQA Guidelines, Section 15126.6(f).) The CEQA Guidelines provide a definition for a “range of reasonable alternatives” and, thus limit the number and type of alternatives that need to be evaluated in an EIR. An EIR need not include any action alternatives inconsistent with the lead agency’s fundamental underlying purpose in proposing a project. (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1166.)

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, “feasible” is defined as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines 15364)

The inclusion of an alternative in an EIR is not evidence that it is feasible as a matter of law, but rather reflects the judgment of lead agency staff that the alternative is potentially feasible. The final determination of feasibility will be made by the lead agency decision-making body through the adoption of CEQA Findings at the time of action on the Project. (Mira Mar Mobile Community v. City of Oceanside (2004) 119 Cal.App.4th 477, 489 see also CEQA Guidelines, §§ 15091(a)) (3) (findings requirement, where alternatives can be rejected as infeasible); 15126.6 ([an EIR] must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation”).) The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6 (f) (1)).

ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Equally important to attaining the project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a less-than-significant level. The exact alternatives that will be evaluated in the Draft EIR will be determined through the Notice of Preparation (NOP) and Scoping Process. Through preliminary discussions, there are three alternatives to the proposed Specific Plan that are being contemplated for evaluation in the Draft EIR. The alternatives being considered include the following:

- **No Project (Existing General Plan) Alternative:** Under this alternative, the Plan Area would remain in its current General Plan land use and zoning designations. Future development allowed under the existing General Plan land use map would be permitted in the Plan Area.
- **Regional Park Alternative:** Under this alternative, future development in the Plan Area would occur similar to what would be allowed under the proposed land use map. However, this alternative would provide a Regional Park within the Plan Area, which would be a minimum of 40 acres in size.
- **Lower Density Alternative:** Under this alternative, future development in the Plan Area would occur similar to what would be allowed under the proposed land use map, but at lower densities.

It is noted that the final alternatives selected for analysis in the Draft EIR will be based on the public scoping process, including input received through public comment.

PLAN ADOPTION AND REGULATION

The Specific Plan may include certain development regulations and standards that are intended to be specific to the Specific Plan Area. Where there is a matter or issue not specifically covered by the Specific Plan development regulations and design standards, the Fresno Zoning Code would apply. Where there is a conflict between the Specific Plan and the Zoning Code, the Specific Plan would prevail.

The Specific Plan is intended to be adopted by the City Council and to serve as a tool for the City of Fresno to implement. The Specific Plan is to be used by designers, developers, builders, and planners, to guide development of the Plan Area. The land use, development standards, and design guidelines are provided to ensure that all proposed developments remain consistent with the vision established by the Specific Plan as the Project is built over time. The Specific Plan development concepts, design guidelines, and standards are in accordance with the City's General Plan, Municipal Ordinances, and City Specifications. The Specific Plan shall be used to review, process, and approve development proposals for the Project site including but not limited to site specific development applications and site improvement plans.

TYPE OF EIR

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. The program-level analysis considers the broad environmental effects of the proposed project as a whole.

It is noted that the Specific Plan provides a very broad level of planning detail. To the extent that sufficient detail is available in the Specific Plan, a more detailed level of analysis is provided in this EIR. Examples of a more detailed level of analysis would include topics that are related to the physical acreage affected (i.e. the project footprint), maximum number of units (or FAR), land uses/zoning, or other design parameters. In many cases, there will be site specific uses that

will have design details developed at a later date. These details are unknown at this time and cannot reasonably be analyzed at a project-level at this time.

This EIR examines the planning, construction and operation of the project. The program-level approach, with limited project-level analysis, is appropriate for the proposed project because it allows comprehensive consideration of the reasonably anticipated scope of the development plan; however, as discussed above, not all design aspects of the future development phases are known at this stage in the planning process. Subsequent individual development that requires further discretionary approvals will be examined in light of this EIR to determine whether additional environmental documentation must be prepared.

CEQA Guidelines Section 15168 states that a program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1. Geographically,
2. As logical parts in the chain of contemplated actions,
3. In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or
4. As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

According to CEQA Guidelines section 15168, subdivision (c)(5), “[a] program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible.” Later environmental documents (EIRs, mitigated negative declarations, or negative declarations) can incorporate by reference materials from the program EIR regarding regional influences, secondary impacts, cumulative impacts, broad alternatives, and other factors (CEQA Guidelines Section 15168[d][2]). These later documents need only focus on new impacts that have not been considered before (CEQA Guidelines Section 15168[d][3]).

Section 15168(c), entitled “Use with Later Activities,” provides, in pertinent part, as follows:

Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared:

1. If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration.
2. If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activities as being within the scope of the project covered by the program EIR, and no new environmental document would be required.
3. An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.

4. Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.

Here, the City anticipates preparing an initial study whenever landowners within the Plan Area submit applications for site-specific approvals (i.e. tentative maps, conditional use permits, or other discretionary entitlements). The initial study would serve in part as a consistency checklist to determine if the application for site specific approval is consistent with the General Plan, Specific Plan, Conditions of Approval, and Mitigation Measures, and it would also include a review of the project details relative to what was anticipated and analyzed in the program EIR (i.e. are there new environmental effects that were not covered by the program EIR). The City's expectation, at least at present, is that the initial study will conclude that most components of the Specific Plan can be developed with no new analysis of environmental effects given that there has been analysis in this program EIR. In some cases, however, a site-specific application (i.e. commercial use) may have specific issues associated with the project, or business, that this program EIR could not anticipate given the information that was available at this time. In those situations, the detailed site-specific information from that application could have site-specific effects not wholly anticipated in this EIR and would require some additional environmental review. (See also CEQA Guidelines section 15063, subd. (b)(1)(C).)

Future site-specific approvals may also be narrowed pursuant to the rules for tiering set forth in CEQA Guidelines Section 15152. "[T]iering is a process by which agencies can adopt programs, plans, policies, or ordinances with EIRs focusing on 'the big picture,' and can then use streamlined CEQA review for individual projects that are consistent with such...[first tier decisions] and are...consistent with local agencies' governing general plans and zoning.'" (*Koster v. County of San Joaquin* (1996) 47 Cal.App.4th 29, 36.) Section 15152 provides that, where a first-tier EIR has "adequately addressed" the subject of cumulative impacts, such impacts need not be revisited in second- and third-tier documents. Furthermore, second- and third-tier documents may limit the examination of impacts to those that "were not examined as significant effects" in the prior EIR or "[a]re susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or other means." In general, significant environmental effects have been "adequately addressed" if the lead agency determines that:

1. they have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental impact report; or
2. they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project.

Here, as noted above, the City anticipates preparing Initial Study whenever landowners within the Plan Area submit applications for site-specific approvals (i.e. tentative maps, conditional use

permits, or other discretionary entitlements). The checklist would serve in part as a consistency checklist to determine if the application for site specific approval is consistent with the General Plan, Specific Plan, Conditions of Approval, and Mitigation Measures, and it would also include a review of the project details relative to what was anticipated and analyzed in the program EIR (i.e. have all significant environmental impacts identified been “adequately addressed” in the program EIR). Thus, if a new analysis is required for these site-specific actions, it would focus on impacts that cannot be “avoided or mitigated” by mitigation measures that either (i) were adopted in connection with the Specific Plan or (ii) were formulated based on information in this EIR.

In addition, because the EIR addresses the effects of rezoning the land within the proposed Plan Area, future environmental review can also be streamlined pursuant to Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183. These provisions, which are similar but not identical to the tiering provisions, generally limit the scope of necessary environmental review for site-specific approvals following the preparation of an EIR for a “zoning action.” For such site-specific approvals, CEQA generally applies only to impacts that are “peculiar to the parcel or to the project” and have not been previously disclosed, except where “substantial new information” shows that previously identified impacts would be more significant than previously assumed. Notably, impacts are considered not to be “peculiar to the parcel or to the project” if they can be substantially mitigated pursuant to previously adopted, uniformly applied development policies or standards. As noted above, the City anticipates that, in assessing the extent to which the Specific Plan EIR has previously addressed significant impacts that might occur with individual projects, the City may conclude that in some instances (e.g., with respect to agricultural resources, cultural resources, geology, soils, and paleontological resources), no further analysis beyond that found in the program EIR will be necessary.

Finally, for purely residential projects consistent with the Specific Plan, the City intends to preserve its ability to treat such projects as exempt from CEQA pursuant to Government Code section 65457. Subdivision (a) of that statute provides that “[a]ny residential development project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an [EIR] has been certified after January 1, 1980, is exempt from the requirements of [CEQA].” The statutes go on to say, moreover, that “if after adoption of the specific plan, an event as specified in Section 21166 of the Public Resources Code occurs, the exemption provided by this subdivision does not apply unless and until a supplemental [EIR] for the specific plan is prepared and certified in accordance with the provisions of [CEQA]. After a supplemental [EIR] is certified, the exemption ... applies to projects undertaken pursuant to the specific plan.” (See also CEQA Guidelines section 15182.)

When purely residential projects are proposed, the City will consider whether they qualify for this exemption or whether the Specific Plan EIR must be updated through a supplement to this EIR or a subsequent EIR as required by Public Resources Code section 21166 and CEQA Guidelines sections 15162 and 15163.

PROJECT ENTITLEMENTS

The City of Fresno will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to the following:

- Certification of the EIR and adoption of the Mitigation Monitoring and Reporting Program (MMRP);
- Approval of the Specific Plan of the West Area;
- Approval of the General Plan amendment modifying land uses.
- Approval of the Zoning Ordinance amendment modifying zoning.

The EIR analyzes the impacts of the Specific Plan and the anticipated subsequent filing of maps and other development applications in the future. Therefore, the EIR analyzes the maximum impacts of the Specific Plan, including these applications yet unfiled, so that future filings will not require separate environmental analysis, as long as development proposed does not substantially deviate from the approved Specific Plan.

ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR will involve the following general procedural steps:

NOTICE OF PREPARATION

The City must circulate a NOP of an EIR for the proposed project to responsible and trustee agencies, the State Clearinghouse, and the public. A public scoping meeting must be held during the public review period to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP will be considered during preparation of the Draft EIR. The NOP and responses to the NOP by interested parties will be presented in an appendix to the EIR.

DRAFT EIR

The Draft EIR will contain a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The Draft EIR will identify issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP will be considered in preparing the analysis in the EIR. Upon completion of the Draft EIR, the City will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the 45-day public review period.

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to significant environmental issues raised either in written comments received during the public review period or in oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

CEQA Guidelines Section 15090 requires lead agencies to certify the final EIR prior to approving a project. The lead agency decision making body shall certify that (i) the Final EIR has been completed in compliance with CEQA; (ii) that the Final EIR was presented to the decision-making body, which reviewed and considered the information contained in the Final EIR prior to approving the project; and (iii) that the Final EIR reflects the lead agency's independent judgment and analysis.

For the proposed project, the City Council shall be the City's ultimate decision-making body. The Council will therefore review and consider the Final EIR and make a determination regarding whether the document is "adequate and complete." In general, a Final EIR meets this standard if:

1. The EIR shows a good faith effort at full disclosure of environmental information; and
2. The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

The level of detail contained throughout the EIR is intended to be consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which the document is based. The Guidelines state as follows:

"An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the project. As part of project approval, the City also is also required to adopt a Mitigation Monitoring and Reporting Program, as described below, prepared in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097. This Mitigation Monitoring and Reporting Program must include all of the mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment, and would be designed to ensure that these measures are actually carried out during project implementation.

USES OF THE EIR AND REQUIRED AGENCY APPROVALS

The City of Fresno will be the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Other agencies may be required to issue permits or approve certain aspects of the proposed project.

Actions that would be required from the City include, but are not limited to, the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- Approval of City of Fresno General Plan Amendments;
- Approval of City of Fresno rezoning;
- Approval of Specific Plan;
- Approval of Development Agreement;
- Approval of future tentative and final maps;
- Approval of future improvement plans;
- Approval of future grading plans;
- Approval of future building permits;
- Approval of future site plan and design review;
- City review and approval of future project utility plans.

The other governmental agencies that may require approvals in connection with the project include, but are not limited to, the following:

- California Department of Fish and Wildlife;
- California Department of Transportation;
- Central Valley Regional Water Quality Control Board - Storm Water Pollution Prevention Plan approval prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District - Approval of construction-related air quality permits;
- San Joaquin Valley Air Pollution Control District - Authority to Construct, Permit to Operate for stationary sources of air pollution;
- State Water Resources Control Board.

AREAS OF POTENTIAL IMPACTS

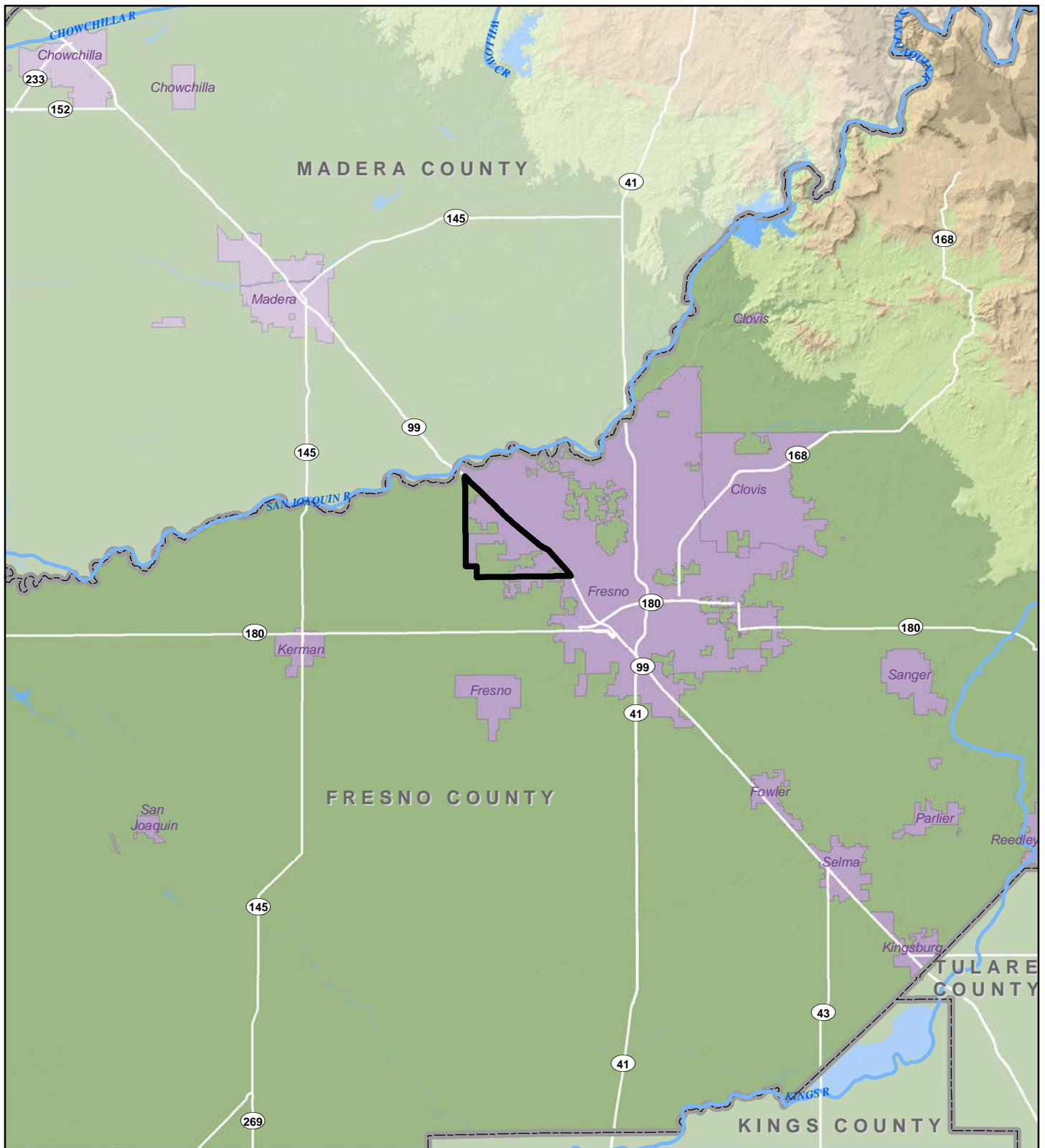
An Initial Study has not been prepared for this project. All environmental topics identified in Appendix G of the State CEQA Guidelines will be analyzed in the EIR, including: Aesthetics, Agricultural and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gases and Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities, Wildfire, Cumulative Impacts, and Growth Inducing Impacts.

Date: June 28, 2019




Signature: 

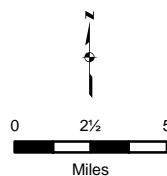
Name/Title: Rodney L. Horton, MPA, Project Planner

Phone/Email: 559-621-8181/Rodney.Horton@fresno.gov



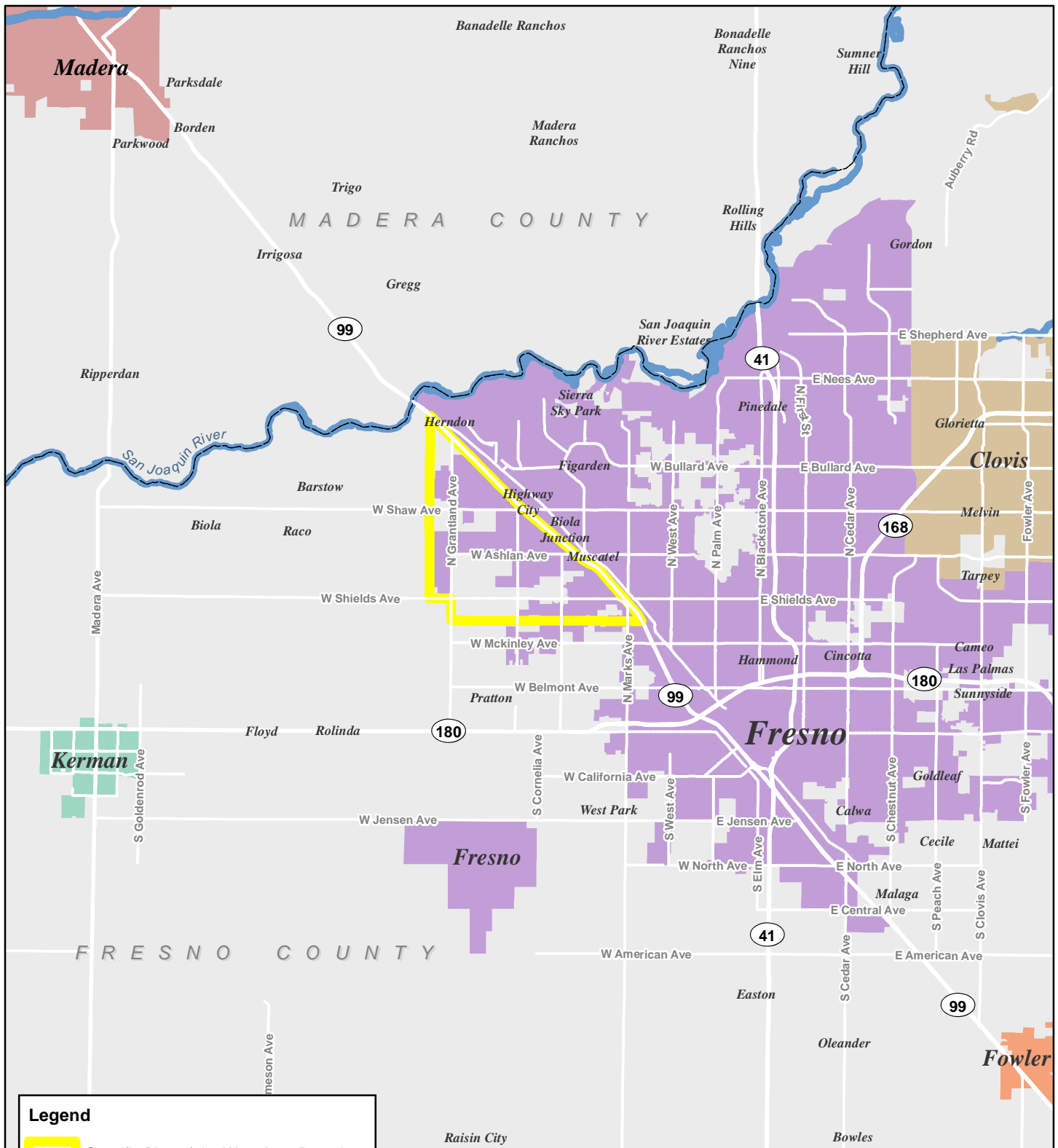
Legend

-  Specific Plan of the West Area
-  City Area
-  County Boundary



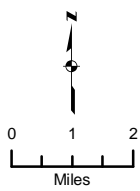
CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

Figure 1. Regional Location Map



Legend

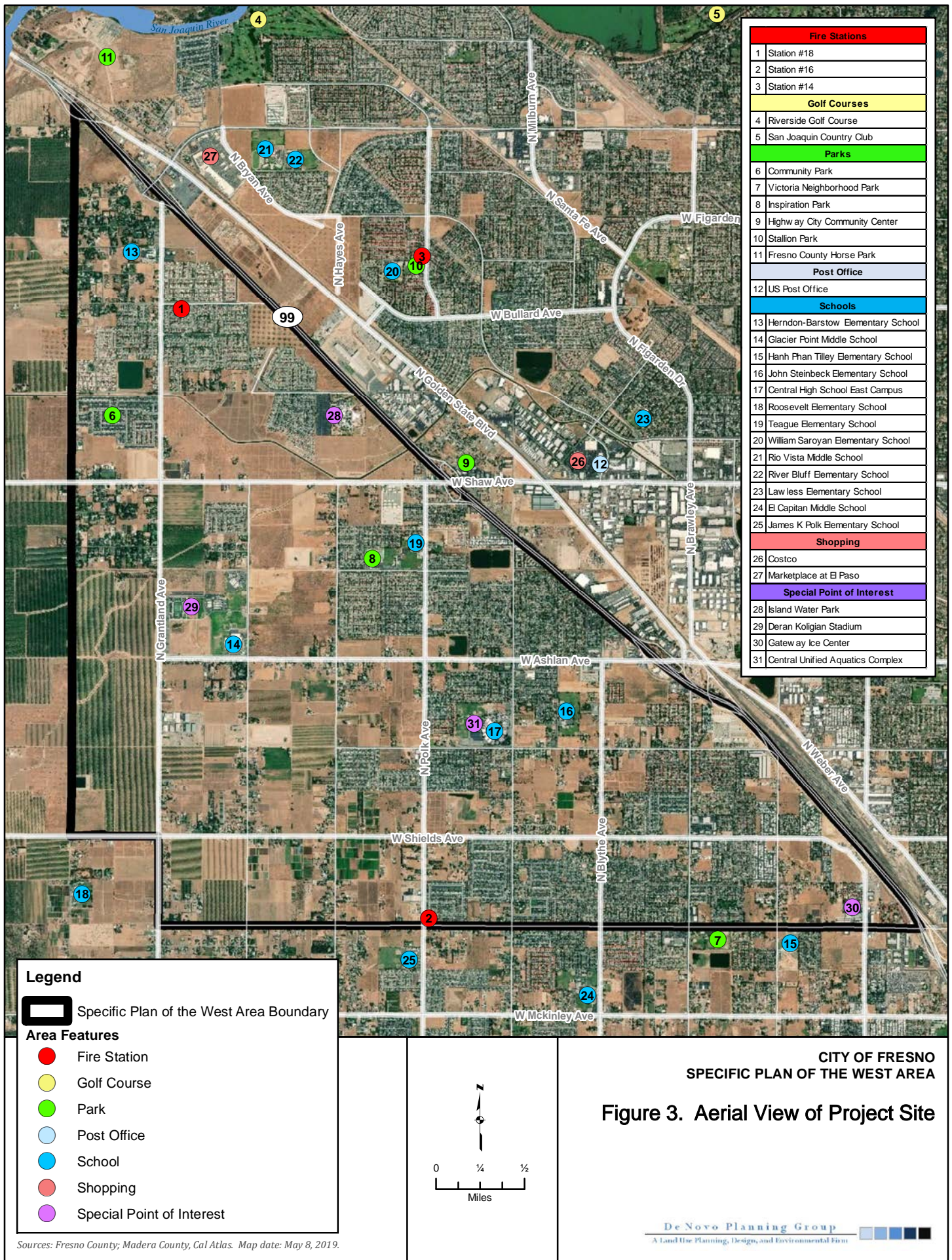
- Specific Plan of the West Area Boundary
- County Boundary
- City Areas**
 - Clovis
 - Fowler
 - Fresno
 - Kerman
 - Madera



**CITY OF FRESNO
SPECIFIC PLAN OF THE WEST AREA**

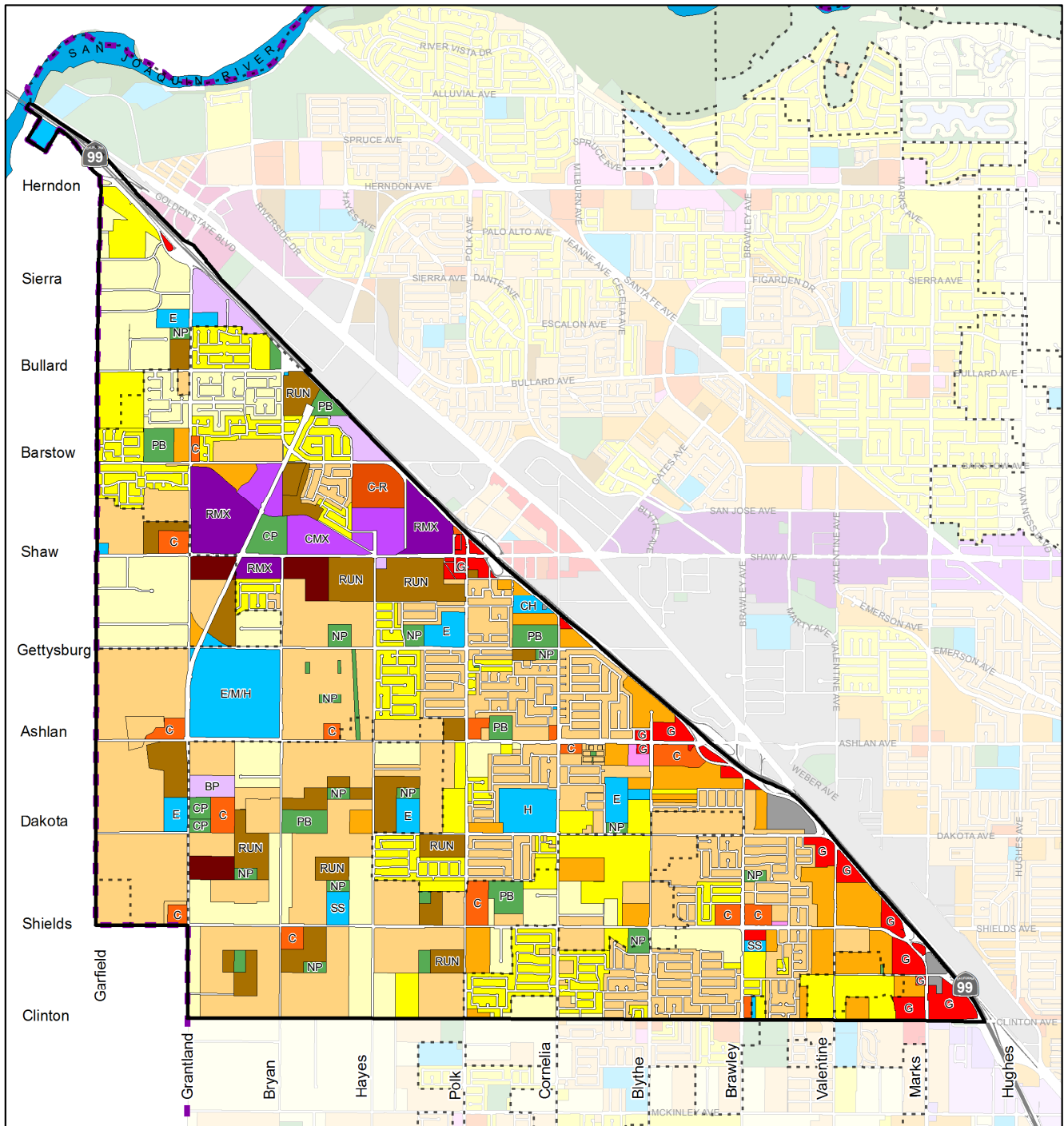
Figure 2. Vicinity Map

Sources: Fresno County; Madera County, Cal Atlas. Map date: May 7, 2019.



CITY OF FRESNO
SPECIFIC PLAN OF THE WEST AREA

Figure 3. Aerial View of Project Site



BOUNDARIES

- City Limits
- West Area Specific Plan Boundary
- Sphere Of Influence

RESIDENTIAL

- Low Density (1-3.5 D.U./acre)
- Medium Low Density (3.5-6 D.U./acre)
- Medium Density (5.0-12 D.U./acre)
- Medium High Density (12-16 D.U./acre)
- Urban Neighborhood (16-30 D.U./acre)
- High Density (30-45 D.U./acre)

PUBLIC FACILITIES

- Public/Quasi-public Facility
- SS Special School
- E Elementary School
- E/M/H Elementary, Middle & High School
- H High School
- CH Church
- FS Fire Station

EMPLOYMENT

- Office
- BP Business Park
- Light Industrial

MIXED USE

- CMX Corridor/Center Mixed Use
- RMX Regional Mixed Use

OPEN SPACE

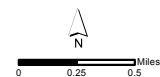
- CP Community Park
- PB Open Space - Ponding Basin
- NP Neighborhood Park
- Open Space
- P Park

COMMERCIAL

- Community
- Recreation
- General

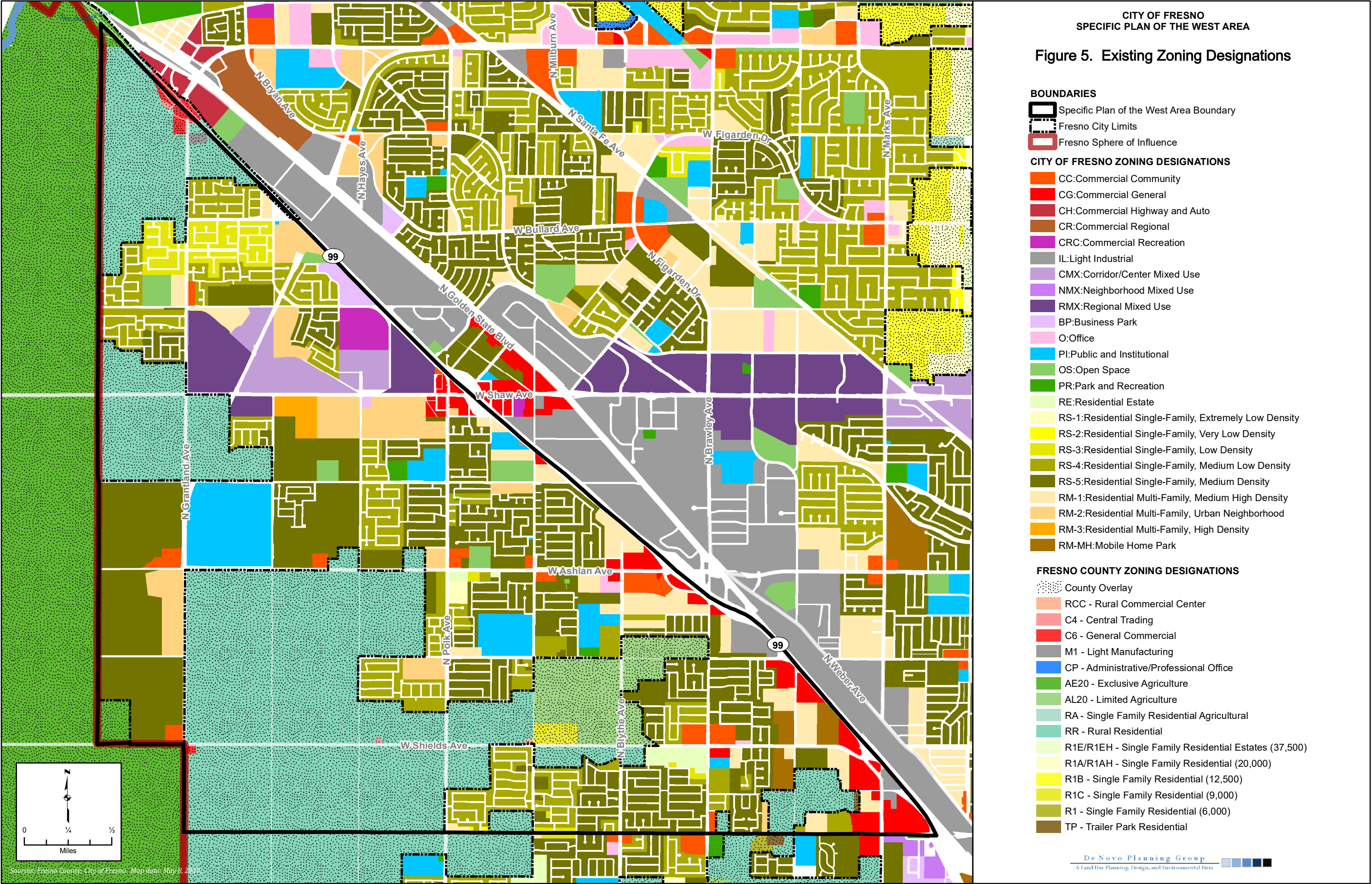
CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

**Figure 4. Existing General
Plan Land Use Designations**



CITY OF FRESNO
SPECIFIC PLAN OF THE WEST AREA

Figure 5. Existing Zoning Designations



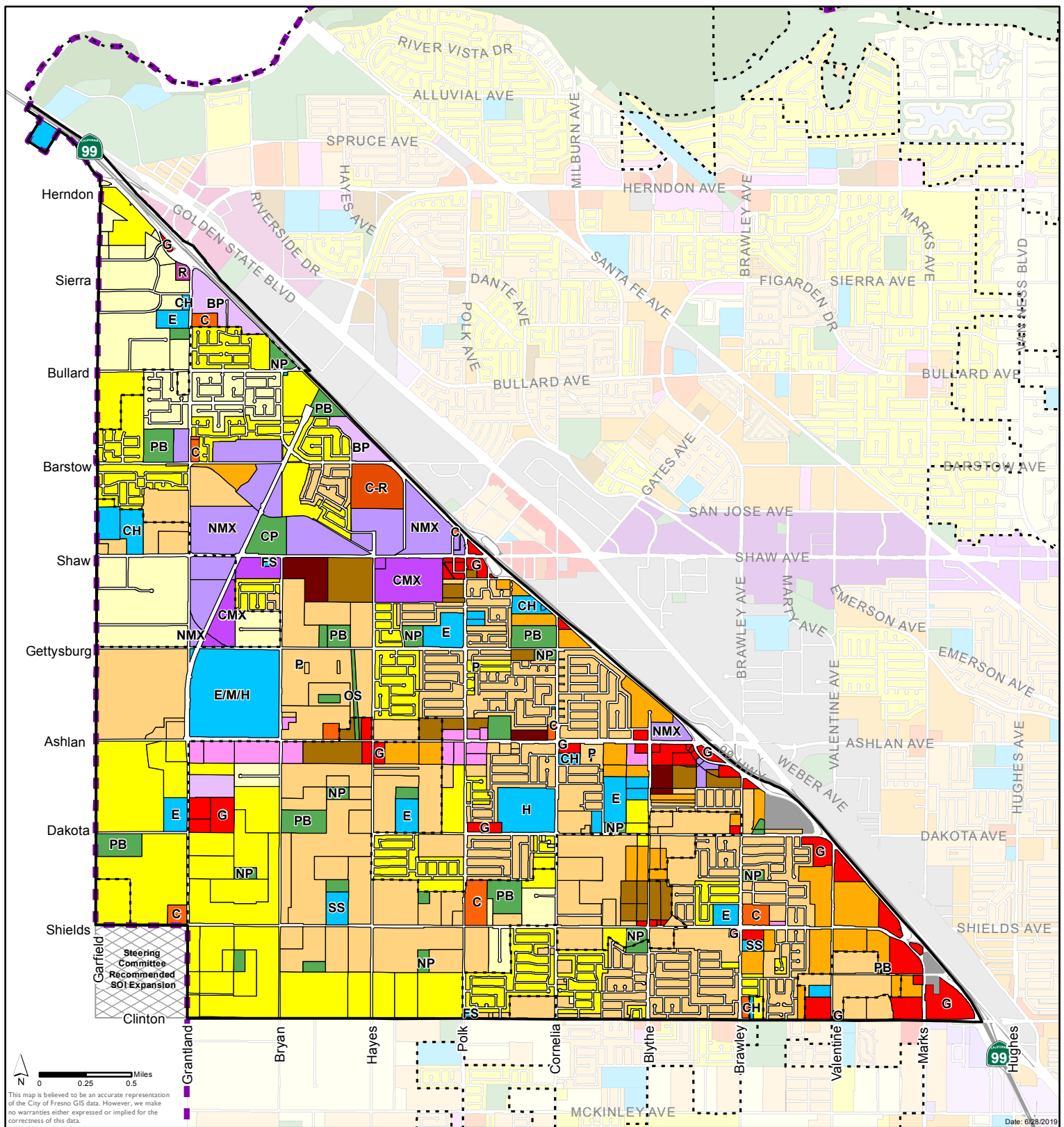


Figure 6. Proposed General Plan Land Use Designations

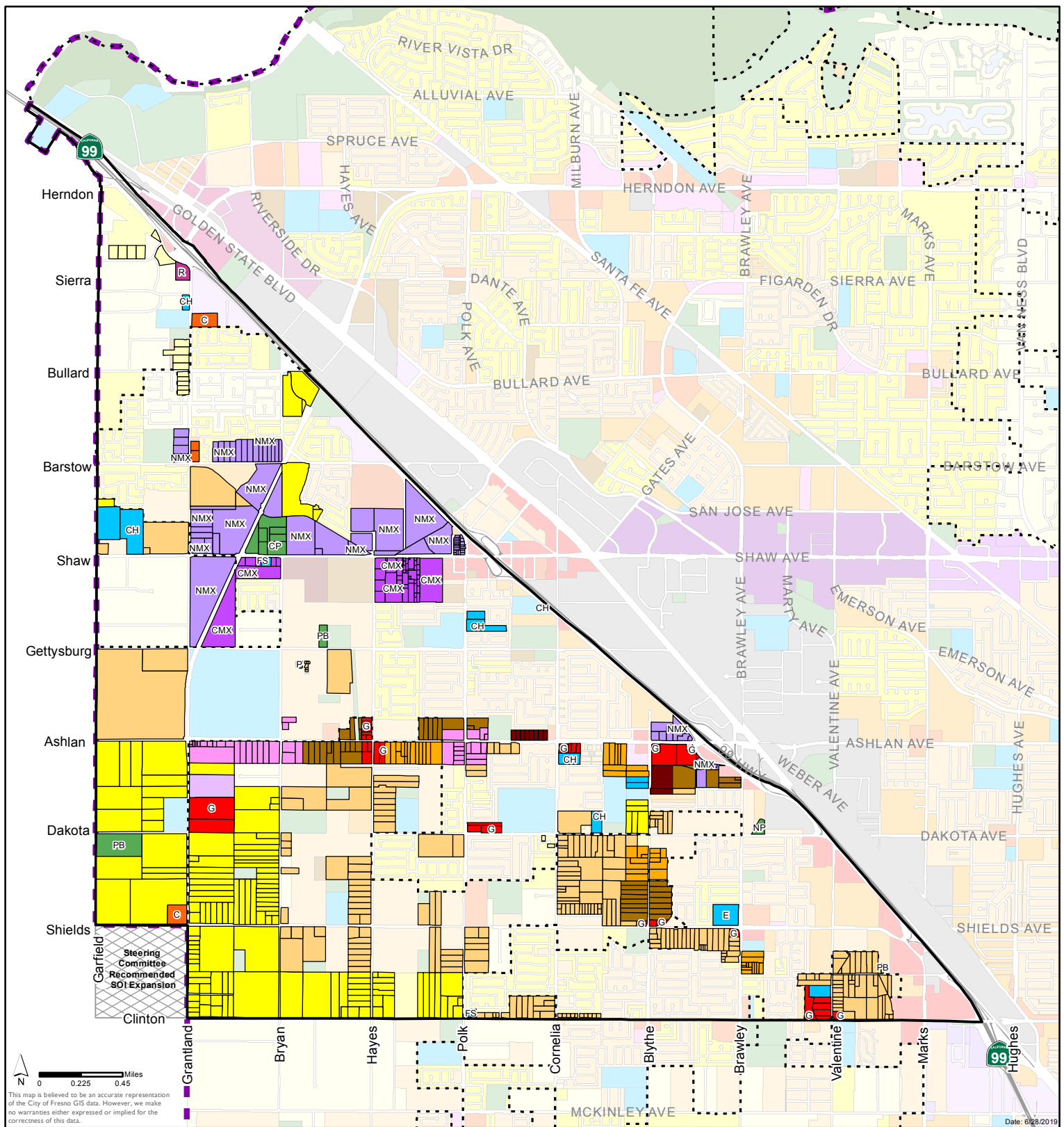


Figure 7. Parcels Proposed for Change in Proposed Land Use Map

APPENDIX B

Criteria Air Pollutant, Greenhouse Gas, and Energy Modeling Results

Fresno WANSP - Recirculated EIR Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Fresno WANSP - Recirculated EIR
Construction Start Date	3/1/2025
Operational Year	2035
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	22.6
Location	36.828741958889765, -119.92078738388003
County	Fresno
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2570
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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Regional Shopping Center	2,474	1000sqft	55.1	2,474,155	0.00	0.00	—	—
Regional Shopping Center	900	1000sqft	41.3	41.3	0.00	0.00	—	—
Regional Shopping Center	14,792	1000sqft	156	156	0.00	0.00	—	—
Regional Shopping Center	185	1000sqft	4.24	184,519	0.00	0.00	—	—
Apartments Mid Rise	339	Dwelling Unit	8.92	325,440	0.00	0.00	1,085	—
General Office Building	4,572	1000sqft	52.5	4,572,212	0.00	0.00	—	—
Office Park	3,266	1000sqft	75.0	3,265,608	0.00	0.00	—	—
Office Park	2,140	1000sqft	32.8	2,139,679	0.00	0.00	—	—
Apartments Mid Rise	14.0	Dwelling Unit	225	13,440	0.00	0.00	45.0	—
Regional Shopping Center	14,929	1000sqft	343	14,928,854	0.00	0.00	—	—
Apartments Mid Rise	17.0	Dwelling Unit	216	16,320	0.00	0.00	54.0	—
Regional Shopping Center	15,222	1000sqft	349	15,222,128	0.00	0.00	—	—
Apartments Mid Rise	1.00	Dwelling Unit	14.9	960	0.00	0.00	3.00	—
Regional Shopping Center	1,297	1000sqft	29.8	1,297,370	0.00	0.00	—	—
City Park	358	Acre	358	0.00	0.00	0.00	—	—
Library	100	1000sqft	22.8	100,000	0.00	0.00	—	Square footage estimated
Place of Worship	20.0	1000sqft	68.5	68.5	0.00	0.00	—	Square footage estimated
Elementary School	20.0	1000sqft	91.8	91.8	0.00	0.00	—	Square footage estimated
Elementary School	20.0	1000sqft	145	145	0.00	0.00	—	Square footage estimated

High School	20.0	1000sqft	47.0	47.0	0.00	0.00	—	Square footage estimated
High School	20.0	1000sqft	18.4	18.4	0.00	0.00	—	Square footage estimated
Government Office Building	20.0	1000sqft	3.32	20,000	0.00	0.00	—	Square footage estimated
Single Family Housing	1,800	Dwelling Unit	508	3,510,000	21,083,143	0.00	5,760	—
Single Family Housing	8,835	Dwelling Unit	1,381	17,228,250	103,483,092	0.00	28,272	—
Single Family Housing	26,082	Dwelling Unit	2,082	50,859,900	305,494,736	0.00	83,462	—
Apartments Low Rise	4,885	Dwelling Unit	301	5,178,100	0.00	0.00	15,632	—
Apartments Mid Rise	5,699	Dwelling Unit	169	5,471,040	0.00	0.00	18,237	—
Apartments High Rise	2,054	Dwelling Unit	27.4	1,971,840	0.00	0.00	6,573	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	484	468	392	1,649	1.19	4.01	282	285	3.87	68.6	72.5	—	427,975	427,975	11.8	35.8	1,288	440,220

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	475	457	466	1,478	1.42	4.29	300	304	4.18	68.5	72.7	—	407,448	407,448	14.7	39.8	37.1	419,705
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	333	321	271	985	0.81	2.14	199	201	2.08	47.9	49.7	—	289,967	289,967	9.11	25.5	396	298,204
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	60.7	58.7	49.5	180	0.15	0.39	36.3	36.7	0.38	8.74	9.07	—	48,007	48,007	1.51	4.23	65.6	49,371

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	186	171	392	1,529	1.19	4.01	262	266	3.87	68.6	72.5	—	397,097	397,097	11.0	33.9	1,264	408,745
2026	484	468	366	1,649	1.15	2.94	282	285	2.88	67.9	70.8	—	427,975	427,975	11.8	35.8	1,288	440,220
2027	466	457	341	1,522	1.13	2.57	282	285	2.54	67.9	70.4	—	417,464	417,464	10.8	33.7	1,154	428,924
2028	456	442	324	1,423	1.13	2.53	282	285	2.51	67.9	70.4	—	408,636	408,636	10.8	33.7	1,032	419,974
2029	446	431	306	1,333	1.13	2.50	282	285	2.48	67.9	70.3	—	399,868	399,868	9.81	32.6	917	410,738
2030	438	423	297	1,245	1.13	2.49	282	284	2.46	67.9	70.3	—	391,155	391,155	8.70	24.8	811	399,579
2031	422	415	282	1,174	1.13	2.47	282	284	1.34	67.9	69.2	—	382,699	382,699	7.73	23.7	715	390,672
2032	413	407	275	1,111	1.13	2.45	282	284	1.32	67.9	69.2	—	374,651	374,651	7.73	23.7	624	382,532
2033	407	402	260	1,051	1.13	1.32	282	283	1.30	67.9	69.2	—	367,274	367,274	7.73	22.6	541	374,742
2034	400	395	254	1,007	1.13	1.31	282	283	1.29	67.9	69.2	—	360,442	360,442	7.73	22.6	465	367,834
2035	397	393	248	965	1.13	1.29	282	283	1.28	67.9	69.1	—	354,170	354,170	6.76	21.5	397	361,141

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	475	457	466	1,478	1.42	4.29	300	304	4.18	68.5	72.7	—	407,448	407,448	14.7	39.8	37.1	419,705
2026	457	447	404	1,366	1.15	2.94	282	285	2.88	67.9	70.8	—	398,914	398,914	13.8	35.8	33.4	409,953
2027	446	430	377	1,263	1.13	2.57	282	285	2.54	67.9	70.4	—	389,099	389,099	13.7	34.7	29.9	399,798
2028	438	423	358	1,175	1.13	2.53	282	285	2.51	67.9	70.4	—	380,868	380,868	12.7	34.7	26.8	391,540
2029	430	414	341	1,106	1.13	2.50	282	285	2.48	67.9	70.3	—	372,675	372,675	12.7	33.5	23.8	383,014
2030	415	406	324	1,037	1.13	2.49	282	284	2.46	67.9	70.3	—	364,500	364,500	10.6	32.6	21.0	374,494
2031	408	401	308	972	1.13	2.47	282	284	1.34	67.9	69.2	—	356,522	356,522	9.68	31.5	18.6	366,159
2032	402	394	300	916	1.13	2.45	282	284	1.32	67.9	69.2	—	348,919	348,919	9.68	23.7	16.1	356,242
2033	396	390	286	870	1.13	1.32	282	283	1.30	67.9	69.2	—	341,927	341,927	9.68	22.6	14.0	348,917
2034	391	384	280	827	1.13	1.31	282	283	1.29	67.9	69.2	—	335,436	335,436	8.70	22.6	12.1	342,400
2035	388	381	274	794	1.13	1.29	282	283	1.28	67.9	69.1	—	329,476	329,476	8.70	21.5	10.3	336,108
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	101	92.3	241	768	0.71	2.14	152	154	2.08	37.6	39.7	—	227,806	227,806	7.38	20.7	329	234,473
2026	333	321	271	985	0.81	1.94	199	201	1.91	47.8	49.7	—	289,967	289,967	9.11	25.5	396	298,204
2027	320	314	257	911	0.81	1.84	199	200	1.82	47.8	49.6	—	283,588	283,588	8.40	24.8	356	291,530
2028	315	305	245	855	0.81	1.81	199	201	1.79	47.9	49.7	—	278,354	278,354	8.42	24.1	319	286,073
2029	308	297	231	797	0.81	1.79	199	200	1.77	47.8	49.5	—	271,629	271,629	7.70	23.3	283	279,038
2030	303	293	220	747	0.81	1.78	199	200	1.76	47.8	49.5	—	265,685	265,685	6.91	23.1	251	272,983
2031	293	287	214	703	0.81	1.76	199	200	0.96	47.8	48.7	—	259,891	259,891	6.22	16.9	220	265,312
2032	289	283	203	669	0.81	1.75	199	201	0.95	47.9	48.8	—	255,070	255,070	6.23	17.0	193	260,479
2033	283	280	197	633	0.81	0.94	199	200	0.93	47.8	48.7	—	249,298	249,298	6.22	16.1	167	254,431
2034	279	276	193	604	0.81	0.93	199	200	0.92	47.8	48.7	—	244,603	244,603	5.52	16.1	143	249,694
2035	278	274	184	577	0.81	0.92	199	199	0.91	47.8	48.7	—	240,280	240,280	5.52	15.4	123	245,115
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	18.5	16.9	44.0	140	0.13	0.39	27.7	28.0	0.38	6.86	7.24	—	37,716	37,716	1.22	3.42	54.5	38,820

2026	60.7	58.7	49.5	180	0.15	0.35	36.2	36.6	0.35	8.72	9.07	—	48,007	48,007	1.51	4.23	65.6	49,371
2027	58.5	57.3	46.9	166	0.15	0.34	36.2	36.6	0.33	8.72	9.05	—	46,951	46,951	1.39	4.10	58.9	48,266
2028	57.6	55.6	44.7	156	0.15	0.33	36.3	36.7	0.33	8.74	9.07	—	46,085	46,085	1.39	3.99	52.8	47,363
2029	56.3	54.2	42.2	145	0.15	0.33	36.2	36.6	0.32	8.72	9.04	—	44,971	44,971	1.28	3.85	46.8	46,198
2030	55.3	53.4	40.1	136	0.15	0.32	36.2	36.6	0.32	8.72	9.04	—	43,987	43,987	1.14	3.82	41.5	45,195
2031	53.4	52.5	39.0	128	0.15	0.32	36.2	36.6	0.17	8.72	8.89	—	43,028	43,028	1.03	2.80	36.4	43,925
2032	52.7	51.7	37.0	122	0.15	0.32	36.3	36.7	0.17	8.74	8.91	—	42,230	42,230	1.03	2.81	32.0	43,125
2033	51.7	51.1	36.0	115	0.15	0.17	36.2	36.4	0.17	8.72	8.89	—	41,274	41,274	1.03	2.67	27.7	42,124
2034	51.0	50.3	35.2	110	0.15	0.17	36.2	36.4	0.17	8.72	8.88	—	40,497	40,497	0.91	2.67	23.7	41,340
2035	50.7	49.9	33.6	105	0.15	0.17	36.2	36.4	0.17	8.72	8.88	—	39,781	39,781	0.91	2.54	20.3	40,582

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6,532	6,312	2,627	21,593	47.1	81.5	4,077	4,158	78.8	1,033	1,112	70,465	5,783,933	5,854,398	7,417	269	6,021	6,125,938
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5,691	5,501	2,839	15,281	43.3	76.8	4,077	4,154	75.3	1,033	1,109	70,465	5,406,664	5,477,129	7,446	284	930	5,748,892
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5,720	5,532	2,509	15,784	40.0	76.3	3,578	3,654	74.4	907	981	70,465	5,065,946	5,136,410	7,411	251	2,804	5,399,272
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	1,044	1,010	458	2,881	7.31	13.9	653	667	13.6	166	179	11,666	838,725	850,391	1,227	41.5	464	893,911
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2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2,900	2,758	1,940	16,479	42.9	25.7	4,077	4,102	24.1	1,033	1,057	—	4,378,781	4,378,781	170	221	5,227	4,454,047
Area	3,557	3,517	42.2	4,758	0.24	4.68	—	4.68	3.54	—	3.54	—	15,449	15,449	0.65	0.13	—	15,504
Energy	74.0	37.0	645	356	4.04	51.1	—	51.1	51.1	—	51.1	—	1,363,489	1,363,489	162	12.5	—	1,371,258
Water	—	—	—	—	—	—	—	—	—	—	—	14,326	26,215	40,541	1,473	35.4	—	87,925
Waste	—	—	—	—	—	—	—	—	—	—	—	56,139	0.00	56,139	5,611	0.00	—	196,410
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	794	794
Total	6,532	6,312	2,627	21,593	47.1	81.5	4,077	4,158	78.8	1,033	1,112	70,465	5,783,933	5,854,398	7,417	269	6,021	6,125,938
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2,660	2,506	2,195	14,925	39.3	25.7	4,077	4,102	24.2	1,033	1,057	—	4,016,960	4,016,960	201	236	136	4,092,505
Area	2,957	2,957	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	74.0	37.0	645	356	4.04	51.1	—	51.1	51.1	—	51.1	—	1,363,489	1,363,489	162	12.5	—	1,371,258
Water	—	—	—	—	—	—	—	—	—	—	—	14,326	26,215	40,541	1,473	35.4	—	87,925
Waste	—	—	—	—	—	—	—	—	—	—	—	56,139	0.00	56,139	5,611	0.00	—	196,410
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	794	794
Total	5,691	5,501	2,839	15,281	43.3	76.8	4,077	4,154	75.3	1,033	1,109	70,465	5,406,664	5,477,129	7,446	284	930	5,748,892

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2,393	2,262	1,844	13,081	35.9	22.9	3,578	3,601	21.5	907	928	—	3,668,623	3,668,623	165	203	2,010	3,735,238
Area	3,253	3,233	20.8	2,346	0.12	2.31	—	2.31	1.74	—	1.74	—	7,619	7,619	0.32	0.06	—	7,646
Energy	74.0	37.0	645	356	4.04	51.1	—	51.1	51.1	—	51.1	—	1,363,489	1,363,489	162	12.5	—	1,371,258
Water	—	—	—	—	—	—	—	—	—	—	—	14,326	26,215	40,541	1,473	35.4	—	87,925
Waste	—	—	—	—	—	—	—	—	—	—	—	56,139	0.00	56,139	5,611	0.00	—	196,410
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	794	794
Total	5,720	5,532	2,509	15,784	40.0	76.3	3,578	3,654	74.4	907	981	70,465	5,065,946	5,136,410	7,411	251	2,804	5,399,272
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	437	413	337	2,387	6.55	4.17	653	657	3.93	166	169	—	607,382	607,382	27.3	33.6	333	618,411
Area	594	590	3.80	428	0.02	0.42	—	0.42	0.32	—	0.32	—	1,261	1,261	0.05	0.01	—	1,266
Energy	13.5	6.76	118	65.0	0.74	9.33	—	9.33	9.33	—	9.33	—	225,741	225,741	26.8	2.07	—	227,027
Water	—	—	—	—	—	—	—	—	—	—	—	2,372	4,340	6,712	244	5.86	—	14,557
Waste	—	—	—	—	—	—	—	—	—	—	—	9,294	0.00	9,294	929	0.00	—	32,518
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131	131
Total	1,044	1,010	458	2,881	7.31	13.9	653	667	13.6	166	179	11,666	838,725	850,391	1,227	41.5	464	893,911

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	47.6	47.6	—	7.21	7.21	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.28	1.15	< 0.005	0.05	—	0.05	0.05	—	0.05	—	197	197	0.01	< 0.005	—	198
Demolition	—	—	—	—	—	—	2.74	2.74	—	0.41	0.41	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.6	32.6	< 0.005	< 0.005	—	32.7
Demolition	—	—	—	—	—	—	0.50	0.50	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.06	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.7	80.7	< 0.005	< 0.005	0.01	82.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.50	0.62	49.0	11.5	0.25	0.72	10.2	10.9	0.72	2.78	3.50	—	38,319	38,319	0.85	5.95	2.41	40,116
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.01	4.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.04	2.76	0.65	0.01	0.04	0.58	0.62	0.04	0.16	0.20	—	2,204	2,204	0.05	0.34	2.30	2,309
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.50	0.12	< 0.005	0.01	0.11	0.11	0.01	0.03	0.04	—	365	365	0.01	0.06	0.38	382

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.94	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	0.59	5.63	5.37	0.01	0.24	—	0.24	0.22	—	0.22	—	943	943	0.04	0.01	—	946
Dust From Material Movement	—	—	—	—	—	—	3.50	3.50	—	1.80	1.80	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	0.98	< 0.005	0.04	—	0.04	0.04	—	0.04	—	156	156	0.01	< 0.005	—	157
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.04	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.40	108
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.4	17.4	< 0.005	< 0.005	0.03	17.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.88	2.88	< 0.005	< 0.005	0.01	2.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.80	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.57	5.29	5.04	0.01	0.22	—	0.22	0.20	—	0.20	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	1.64	1.64	—	0.65	0.65	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.96	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.05	0.74	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	121	121	< 0.005	0.01	0.45	123
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	0.03	20.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.29	3.29	< 0.005	< 0.005	0.01	3.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.67	6.25	7.81	0.01	0.26	—	0.26	0.24	—	0.24	—	1,436	1,436	0.06	0.01	—	1,441
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.14	1.43	< 0.005	0.05	—	0.05	0.04	—	0.04	—	238	238	0.01	< 0.005	—	239
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	167	157	83.7	1,367	0.00	0.00	200	200	0.00	46.9	46.9	—	222,744	222,744	6.48	9.48	834	226,564
Vendor	13.6	8.86	266	118	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	165,235	165,235	4.15	24.4	429	173,031
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	149	138	101	1,108	0.00	0.00	200	200	0.00	46.9	46.9	—	197,684	197,684	8.91	9.48	21.6	200,752
Vendor	12.5	8.03	283	124	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	165,542	165,542	3.88	24.4	11.2	172,912
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	89.8	84.1	54.8	675	0.00	0.00	118	118	0.00	27.6	27.6	—	122,617	122,617	4.85	5.67	216	124,646
Vendor	7.79	4.97	165	72.1	0.66	1.33	24.9	26.3	1.33	6.90	8.22	—	99,025	99,025	2.32	14.6	111	103,542
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.4	15.3	10.0	123	0.00	0.00	21.5	21.5	0.00	5.04	5.04	—	20,301	20,301	0.80	0.94	35.7	20,636
Vendor	1.42	0.91	30.1	13.2	0.12	0.24	4.55	4.79	0.24	1.26	1.50	—	16,395	16,395	0.38	2.42	18.4	17,143
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.77	7.04	9.26	0.02	0.27	—	0.27	0.25	—	0.25	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.69	< 0.005	0.05	—	0.05	0.05	—	0.05	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	156	146	75.8	1,258	0.00	0.00	200	200	0.00	46.9	46.9	—	218,106	218,106	6.48	9.48	757	221,850
Vendor	13.3	8.86	257	115	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	162,117	162,117	3.88	24.4	379	169,854
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	134	130	93.1	1,018	0.00	0.00	200	200	0.00	46.9	46.9	—	193,636	193,636	8.10	9.48	19.6	196,682

Vendor	12.5	8.03	274	120	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	162,430	162,430	3.88	24.4	9.82	169,799
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	101	94.5	59.8	741	0.00	0.00	141	141	0.00	32.9	32.9	—	143,252	143,252	5.21	6.77	233	145,632
Vendor	9.10	5.93	190	83.5	0.79	1.58	29.7	31.3	1.58	8.23	9.81	—	115,892	115,892	2.77	17.4	117	121,265
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.5	17.3	10.9	135	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	23,717	23,717	0.86	1.12	38.6	24,111
Vendor	1.66	1.08	34.8	15.2	0.14	0.29	5.43	5.72	0.29	1.50	1.79	—	19,187	19,187	0.46	2.88	19.3	20,077
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.71	9.24	0.02	0.24	—	0.24	0.22	—	0.22	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.22	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	141	138	68.0	1,163	0.00	0.00	200	200	0.00	46.9	46.9	—	213,559	213,559	5.67	8.67	684	216,968
Vendor	13.3	8.86	249	112	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	158,662	158,662	3.88	23.3	333	166,024
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	126	116	84.5	944	0.00	0.00	200	200	0.00	46.9	46.9	—	189,655	189,655	8.10	9.48	17.7	192,700
Vendor	12.5	8.03	265	117	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	158,982	158,982	3.88	23.3	8.63	166,019
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	91.1	88.8	54.2	683	0.00	0.00	141	141	0.00	32.9	32.9	—	140,296	140,296	4.63	6.77	211	142,639
Vendor	9.10	5.93	185	81.3	0.79	1.58	29.7	31.3	1.58	8.23	9.81	—	113,426	113,426	2.77	16.6	103	118,549
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.6	16.2	9.88	125	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	23,228	23,228	0.77	1.12	34.9	23,616

Vendor	1.66	1.08	33.8	14.8	0.14	0.29	5.43	5.72	0.29	1.50	1.79	—	18,779	18,779	0.46	2.75	17.0	19,627
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.92	12.9	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.39	9.26	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.17	1.69	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	135	126	60.1	1,083	0.00	0.00	200	200	0.00	46.9	46.9	—	209,438	209,438	5.67	8.67	615	212,777
Vendor	11.9	8.31	242	109	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	154,780	154,780	3.88	23.3	293	162,102
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	120	111	76.6	873	0.00	0.00	200	200	0.00	46.9	46.9	—	186,027	186,027	7.29	9.48	16.0	189,050
Vendor	11.1	8.03	257	114	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	155,104	155,104	3.88	23.3	7.60	162,141
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	87.3	80.5	48.7	638	0.00	0.00	141	141	0.00	33.0	33.0	—	137,986	137,986	4.64	6.21	190	140,143
Vendor	8.33	5.95	179	79.3	0.79	1.59	29.8	31.4	1.59	8.25	9.83	—	110,957	110,957	2.78	16.7	90.6	116,082
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.9	14.7	8.88	116	0.00	0.00	25.7	25.7	0.00	6.03	6.03	—	22,845	22,845	0.77	1.03	31.5	23,202
Vendor	1.52	1.09	32.7	14.5	0.14	0.29	5.44	5.73	0.29	1.51	1.79	—	18,370	18,370	0.46	2.76	15.0	19,219
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.97	8.58	12.9	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	0.69	6.13	9.22	0.02	0.20	—	0.20	0.18	—	0.18	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.12	1.68	< 0.005	0.04	—	0.04	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	127	118	53.1	1,010	0.00	0.00	200	200	0.00	46.9	46.9	—	205,567	205,567	4.86	8.67	549	208,820
Vendor	11.6	7.20	233	107	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	150,658	150,658	3.88	22.2	258	157,615
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	114	104	69.6	817	0.00	0.00	200	200	0.00	46.9	46.9	—	182,633	182,633	7.29	9.48	14.3	185,654

Vendor	11.1	6.65	248	112	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	150,985	150,985	3.88	22.2	6.68	157,690
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	81.8	75.0	43.5	591	0.00	0.00	141	141	0.00	32.9	32.9	—	135,093	135,093	4.05	6.19	169	137,209
Vendor	8.31	4.95	172	77.7	0.79	1.58	29.7	31.3	1.58	8.23	9.81	—	107,710	107,710	2.77	15.8	79.4	112,574
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	14.9	13.7	7.94	108	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	22,366	22,366	0.67	1.02	28.1	22,716
Vendor	1.52	0.90	31.5	14.2	0.14	0.29	5.43	5.72	0.29	1.50	1.79	—	17,833	17,833	0.46	2.62	13.1	18,638
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	5.99	9.20	0.02	0.19	—	0.19	0.17	—	0.17	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	1.09	1.68	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	120	112	51.4	938	0.00	0.00	200	200	0.00	46.9	46.9	—	201,914	201,914	4.86	2.43	489	203,249
Vendor	11.6	7.20	227	105	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	146,328	146,328	2.77	21.9	225	153,141
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	101	97.8	61.7	761	0.00	0.00	200	200	0.00	46.9	46.9	—	179,427	179,427	6.48	8.67	12.7	182,184
Vendor	11.1	6.37	240	110	1.11	2.22	42.1	44.4	2.22	11.6	13.9	—	146,657	146,657	2.77	22.2	5.84	153,334
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	77.8	71.6	37.9	550	0.00	0.00	141	141	0.00	32.9	32.9	—	132,716	132,716	4.05	6.19	151	134,813
Vendor	8.11	4.95	168	76.5	0.79	1.58	29.7	31.3	1.58	8.23	9.81	—	104,618	104,618	1.98	15.6	69.6	109,394
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	14.2	13.1	6.92	100	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	21,973	21,973	0.67	1.02	25.0	22,320

Vendor	1.48	0.90	30.6	14.0	0.14	0.29	5.43	5.72	0.29	1.50	1.79	—	17,321	17,321	0.33	2.59	11.5	18,111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	107	104	44.4	880	0.00	0.00	200	200	0.00	46.9	46.9	—	198,576	198,576	4.05	2.43	433	199,834
Vendor	11.6	7.20	220	104	1.11	2.22	42.1	44.4	1.11	11.6	12.8	—	141,878	141,878	2.77	20.8	196	148,333
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	96.1	93.7	53.9	708	0.00	0.00	200	200	0.00	46.9	46.9	—	176,484	176,484	5.67	8.67	11.2	179,220
Vendor	10.5	6.09	234	108	1.11	2.22	42.1	44.4	1.11	11.6	12.8	—	142,210	142,210	2.77	21.0	5.08	148,556
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	69.3	67.5	37.3	515	0.00	0.00	141	141	0.00	32.9	32.9	—	130,535	130,535	3.47	1.74	133	131,272
Vendor	7.91	4.75	163	75.2	0.79	1.58	29.7	31.3	0.79	8.23	9.02	—	101,441	101,441	1.98	14.8	60.3	105,972
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.6	12.3	6.81	94.0	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	21,612	21,612	0.57	0.29	22.0	21,734
Vendor	1.44	0.87	29.7	13.7	0.14	0.29	5.43	5.72	0.14	1.50	1.65	—	16,795	16,795	0.33	2.46	9.98	17,545
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.64	9.16	0.02	0.16	—	0.16	0.15	—	0.15	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.03	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	99.4	97.8	43.6	829	0.00	0.00	200	200	0.00	46.9	46.9	—	195,470	195,470	4.05	2.43	380	196,676
Vendor	11.4	6.92	214	102	1.11	2.22	42.1	44.4	1.11	11.6	12.8	—	137,556	137,556	2.77	20.8	168	143,982
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	90.5	88.0	53.1	663	0.00	0.00	200	200	0.00	46.9	46.9	—	173,747	173,747	5.67	2.43	9.81	174,623

Vendor	10.5	6.09	228	106	1.11	2.22	42.1	44.4	1.11	11.6	12.8	—	137,892	137,892	2.77	20.8	4.36	144,155
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	65.4	63.6	31.8	487	0.00	0.00	141	141	0.00	33.0	33.0	—	128,861	128,861	3.48	1.74	118	129,584
Vendor	7.74	4.76	159	74.4	0.79	1.59	29.8	31.4	0.79	8.25	9.04	—	98,624	98,624	1.98	14.9	52.0	103,159
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.9	11.6	5.80	88.9	0.00	0.00	25.7	25.7	0.00	6.03	6.03	—	21,334	21,334	0.58	0.29	19.5	21,454
Vendor	1.41	0.87	29.0	13.6	0.14	0.29	5.44	5.73	0.14	1.51	1.65	—	16,328	16,328	0.33	2.46	8.60	17,079
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.05	0.88	7.67	12.8	0.02	0.20	—	0.20	0.19	—	0.19	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.48	9.13	0.02	0.15	—	0.15	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.00	1.67	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	95.3	93.7	36.5	780	0.00	0.00	200	200	0.00	46.9	46.9	—	192,742	192,742	4.05	2.43	332	193,899
Vendor	9.97	6.92	208	101	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	133,453	133,453	2.77	19.7	143	139,524
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	86.4	84.8	46.0	627	0.00	0.00	200	200	0.00	46.9	46.9	—	171,338	171,338	5.67	2.43	8.60	172,213
Vendor	9.42	6.09	222	105	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	133,791	133,791	2.77	19.7	3.71	139,723
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	62.3	61.2	31.1	458	0.00	0.00	141	141	0.00	32.9	32.9	—	126,722	126,722	3.47	1.74	103	127,428
Vendor	6.92	4.75	154	73.2	0.79	0.79	29.7	30.5	0.79	8.23	9.02	—	95,425	95,425	1.98	14.0	44.1	99,703
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.4	11.2	5.68	83.6	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	20,980	20,980	0.57	0.29	17.0	21,097

Vendor	1.26	0.87	28.1	13.4	0.14	0.14	5.43	5.57	0.14	1.50	1.65	—	15,799	15,799	0.33	2.33	7.31	16,507
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Building Construction (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	7.52	12.8	0.02	0.19	—	0.19	0.18	—	0.18	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.37	9.12	0.02	0.14	—	0.14	0.13	—	0.13	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.98	1.66	< 0.005	0.03	—	0.03	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	89.7	88.0	35.7	745	0.00	0.00	200	200	0.00	46.9	46.9	—	190,263	190,263	4.05	2.43	287	191,376
Vendor	9.97	6.92	203	99.4	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	129,595	129,595	2.77	19.7	120	135,644
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	82.4	79.9	45.2	592	0.00	0.00	200	200	0.00	46.9	46.9	—	169,142	169,142	4.86	2.43	7.45	169,995
Vendor	9.42	6.09	217	103	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	129,935	129,935	2.77	19.7	3.12	135,867
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	58.8	57.7	30.5	435	0.00	0.00	141	141	0.00	32.9	32.9	—	125,104	125,104	2.89	1.74	88.6	125,782
Vendor	6.92	4.75	151	72.2	0.79	0.79	29.7	30.5	0.79	8.23	9.02	—	92,670	92,670	1.98	14.0	37.1	96,942
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.7	10.5	5.58	79.3	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	20,712	20,712	0.48	0.29	14.7	20,825
Vendor	1.26	0.87	27.5	13.2	0.14	0.14	5.43	5.57	0.14	1.50	1.65	—	15,343	15,343	0.33	2.33	6.14	16,050
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Building Construction (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.34	12.7	0.02	0.18	—	0.18	0.17	—	0.17	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.72	0.61	5.24	9.06	0.02	0.13	—	0.13	0.12	—	0.12	—	1,712	1,712	0.07	0.01	—	1,718
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.96	1.65	< 0.005	0.02	—	0.02	0.02	—	0.02	—	283	283	0.01	< 0.005	—	284
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	87.2	86.4	34.9	710	0.00	0.00	200	200	0.00	46.9	46.9	—	188,044	188,044	3.24	2.43	248	189,097
Vendor	9.97	6.92	198	99.1	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	125,987	125,987	2.77	18.6	99.9	131,685
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	79.9	77.5	44.4	565	0.00	0.00	200	200	0.00	46.9	46.9	—	167,181	167,181	4.86	2.43	6.42	168,033

Vendor	9.14	5.82	213	102	1.11	1.11	42.1	43.3	1.11	11.6	12.8	—	126,328	126,328	2.77	18.6	2.60	131,929
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	57.7	55.9	26.1	413	0.00	0.00	141	141	0.00	32.9	32.9	—	123,650	123,650	2.89	1.74	76.4	124,316
Vendor	6.92	4.75	147	71.2	0.79	0.79	29.7	30.5	0.79	8.23	9.02	—	90,093	90,093	1.98	13.3	30.8	94,122
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	10.5	10.2	4.76	75.4	0.00	0.00	25.7	25.7	0.00	6.01	6.01	—	20,472	20,472	0.48	0.29	12.7	20,582
Vendor	1.26	0.87	26.9	13.0	0.14	0.14	5.43	5.57	0.14	1.50	1.65	—	14,916	14,916	0.33	2.19	5.10	15,583
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.92	5.92	< 0.005	< 0.005	—	5.94
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.98	0.98	< 0.005	< 0.005	—	0.98
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.7	80.7	< 0.005	< 0.005	0.01	82.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.63	2.28	< 0.005	0.07	—	0.07	0.07	—	0.07	—	346	346	0.01	< 0.005	—	347
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	57.3	57.3	< 0.005	< 0.005	—	57.5
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.03	0.51	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	89.0	89.0	< 0.005	< 0.005	0.31	90.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.42	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.1	79.1	< 0.005	< 0.005	0.01	80.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.7	18.7	< 0.005	< 0.005	0.03	19.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.10	3.10	< 0.005	< 0.005	0.01	3.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.33. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.52	0.52	< 0.005	< 0.005	—	0.52
Architectural Coatings	1.10	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.09	0.09	< 0.005	< 0.005	—	0.09
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	29.8	27.6	20.2	222	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	39,537	39,537	1.78	1.90	4.32	40,150
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.07	0.88	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	160	160	0.01	0.01	0.28	163
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.05	27.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.35. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.61	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	31.1	29.2	15.2	252	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	43,621	43,621	1.30	1.90	151	44,370
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	26.8	26.0	18.6	204	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	38,727	38,727	1.62	1.90	3.92	39,336
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	20.3	18.9	12.0	148	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	28,650	28,650	1.04	1.35	46.6	29,126
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.70	3.45	2.18	27.0	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,743	4,743	0.17	0.22	7.72	4,822
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.37. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.59	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	28.3	27.6	13.6	233	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	42,712	42,712	1.13	1.73	137	43,394
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	25.2	23.3	16.9	189	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	37,931	37,931	1.62	1.90	3.55	38,540
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.2	17.8	10.8	137	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	28,059	28,059	0.93	1.35	42.2	28,528
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.32	3.24	1.98	24.9	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,646	4,646	0.15	0.22	6.98	4,723
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.39. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.58	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.6	95.6	< 0.005	< 0.005	—	96.0
Architect ural Coatings	202	202	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Architect ural Coatings	36.8	36.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	27.0	25.2	12.0	217	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	41,888	41,888	1.13	1.73	123	42,555
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	24.0	22.1	15.3	175	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	37,205	37,205	1.46	1.90	3.19	37,810
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.5	16.1	9.73	128	0.00	0.00	28.2	28.2	0.00	6.61	6.61	—	27,597	27,597	0.93	1.24	38.1	28,029
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	3.18	2.94	1.78	23.3	0.00	0.00	5.15	5.15	0.00	1.21	1.21	—	4,569	4,569	0.15	0.21	6.30	4,640
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.41. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.57	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architectural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architectural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	25.3	23.6	10.6	202	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	41,113	41,113	0.97	1.73	110	41,764
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	22.7	20.8	13.9	163	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	36,527	36,527	1.46	1.90	2.85	37,131
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.4	15.0	8.70	118	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	27,019	27,019	0.81	1.24	33.9	27,442
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.99	2.74	1.59	21.6	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,473	4,473	0.13	0.20	5.61	4,543
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.43. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.78	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.78	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.56	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	24.0	22.3	10.3	188	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	40,383	40,383	0.97	0.49	97.7	40,650
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	20.2	19.6	12.3	152	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	35,885	35,885	1.30	1.73	2.53	36,437
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	15.6	14.3	7.58	110	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	26,543	26,543	0.81	1.24	30.2	26,963
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.84	2.61	1.38	20.1	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,395	4,395	0.13	0.20	5.00	4,464
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.45. Architectural Coating (2031) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.78	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.78	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.55	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	21.3	20.8	8.88	176	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	39,715	39,715	0.81	0.49	86.5	39,967
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	19.2	18.7	10.8	142	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	35,297	35,297	1.13	1.73	2.25	35,844
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.9	13.5	7.46	103	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	26,107	26,107	0.69	0.35	26.6	26,254
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.53	2.46	1.36	18.8	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,322	4,322	0.11	0.06	4.41	4,347
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.47. Architectural Coating (2032) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.77	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.77	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.55	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.6	95.6	< 0.005	< 0.005	—	95.9
Architect ural Coatings	202	202	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.9
Architect ural Coatings	36.8	36.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	19.9	19.6	8.72	166	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	39,094	39,094	0.81	0.49	76.0	39,335
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	18.1	17.6	10.6	133	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	34,749	34,749	1.13	0.49	1.96	34,925
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	13.1	12.7	6.36	97.4	0.00	0.00	28.2	28.2	0.00	6.61	6.61	—	25,772	25,772	0.70	0.35	23.5	25,917
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.39	2.32	1.16	17.8	0.00	0.00	5.15	5.15	0.00	1.21	1.21	—	4,267	4,267	0.12	0.06	3.89	4,291
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.49. Architectural Coating (2033) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.55	0.79	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	19.1	18.7	7.31	156	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	38,548	38,548	0.81	0.49	66.4	38,780
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.3	17.0	9.20	125	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	34,268	34,268	1.13	0.49	1.72	34,443
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	12.5	12.2	6.23	91.6	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	25,344	25,344	0.69	0.35	20.5	25,486
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.27	2.23	1.14	16.7	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,196	4,196	0.11	0.06	3.40	4,219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.51. Architectural Coating (2034) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.54	0.79	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.9	17.6	7.14	149	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	38,053	38,053	0.81	0.49	57.4	38,275
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.5	16.0	9.04	118	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	33,828	33,828	0.97	0.49	1.49	33,999
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.8	11.5	6.11	87.0	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	25,021	25,021	0.58	0.35	17.7	25,156
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.15	2.11	1.12	15.9	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,142	4,142	0.10	0.06	2.93	4,165
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.53. Architectural Coating (2035) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.76	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	281	281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.54	0.78	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	95.4	95.4	< 0.005	< 0.005	—	95.7
Architect ural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Architect ural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	17.4	17.3	6.98	142	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	37,609	37,609	0.65	0.49	49.6	37,819
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	16.0	15.5	8.88	113	0.00	0.00	40.0	40.0	0.00	9.37	9.37	—	33,436	33,436	0.97	0.49	1.28	33,607
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	11.5	11.2	5.22	82.7	0.00	0.00	28.1	28.1	0.00	6.59	6.59	—	24,730	24,730	0.58	0.35	15.3	24,863
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.11	2.04	0.95	15.1	0.00	0.00	5.14	5.14	0.00	1.20	1.20	—	4,094	4,094	0.10	0.06	2.53	4,116
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.55. Underground Utilities (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NO _x	CO	SO ₂	PM _{10E}	PM _{10D}	PM _{10T}	PM _{2.5E}	PM _{2.5D}	PM _{2.5T}	BCO ₂	NBCO ₂	CO _{2T}	CH ₄	N ₂ O	R	CO _{2e}
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	1,838	1,761	1,102	8,826	21.1	13.0	1,978	1,991	12.2	501	513	—	2,159,266	2,159,266	100	119	2,535	2,199,886
Apartments Mid Rise	65.9	61.9	52.3	478	1.36	0.79	131	132	0.75	33.3	34.1	—	138,961	138,961	4.35	6.33	169	141,125
General Office Building	88.0	82.8	68.1	616	1.73	1.01	167	168	0.95	42.4	43.4	—	177,163	177,163	5.71	8.17	215	179,956
Office Park	101	95.2	78.3	709	1.99	1.16	192	194	1.10	48.8	49.8	—	203,692	203,692	6.56	9.40	247	206,903
City Park	2.06	1.94	1.60	14.5	0.04	0.02	3.92	3.95	0.02	0.99	1.02	—	4,153	4,153	0.13	0.19	5.03	4,219
Library	21.1	19.8	16.3	148	0.42	0.24	40.1	40.3	0.23	10.2	10.4	—	42,453	42,453	1.37	1.96	51.4	43,122
Place of Worship	0.27	0.26	0.21	1.92	0.01	< 0.005	0.52	0.52	< 0.005	0.13	0.14	—	552	552	0.02	0.03	0.67	561
Elementary School	1.10	1.04	0.85	7.72	0.02	0.01	2.10	2.11	0.01	0.53	0.54	—	2,220	2,220	0.07	0.10	2.69	2,255
High School	0.16	0.15	0.13	1.15	< 0.005	< 0.005	0.31	0.31	< 0.005	0.08	0.08	—	331	331	0.01	0.02	0.40	336

Government Office Building	1.19	1.12	0.92	8.33	0.02	0.01	2.26	2.28	0.01	0.57	0.59	—	2,395	2,395	0.08	0.11	2.90	2,433
Single Family Housing	692	649	549	5,019	14.3	8.31	1,380	1,388	7.83	350	358	—	1,458,621	1,458,621	45.7	66.5	1,769	1,481,335
Apartments Low Rise	71.4	67.0	56.6	518	1.47	0.86	142	143	0.81	36.1	36.9	—	150,480	150,480	4.71	6.86	183	152,823
Apartments High Rise	18.3	17.1	14.5	132	0.38	0.22	36.4	36.6	0.21	9.23	9.44	—	38,494	38,494	1.21	1.75	46.7	39,093
Total	2,900	2,758	1,940	16,479	42.9	25.7	4,077	4,102	24.1	1,033	1,057	—	4,378,781	4,378,781	170	221	5,227	4,454,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	1,682	1,597	1,245	8,409	19.4	13.0	1,978	1,991	12.2	501	513	—	1,984,634	1,984,634	121	128	65.7	2,025,891
Apartments Mid Rise	60.7	56.4	59.3	406	1.24	0.79	131	132	0.75	33.3	34.1	—	127,236	127,236	4.97	6.75	4.37	129,377
General Office Building	80.9	75.5	77.1	528	1.59	1.01	167	168	0.95	42.4	43.4	—	162,251	162,251	6.55	8.72	5.56	165,019
Office Park	93.1	86.8	88.7	607	1.82	1.17	192	194	1.10	48.8	49.9	—	186,547	186,547	7.53	10.0	6.40	189,730
City Park	1.90	1.77	1.81	12.4	0.04	0.02	3.92	3.95	0.02	0.99	1.02	—	3,804	3,804	0.15	0.20	0.13	3,869
Library	19.4	18.1	18.5	127	0.38	0.24	40.1	40.3	0.23	10.2	10.4	—	38,880	38,880	1.57	2.09	1.33	39,543
Place of Worship	0.25	0.24	0.24	1.65	< 0.005	< 0.005	0.52	0.52	< 0.005	0.13	0.14	—	506	506	0.02	0.03	0.02	514
Elementary School	1.01	0.95	0.97	6.62	0.02	0.01	2.10	2.11	0.01	0.53	0.54	—	2,033	2,033	0.08	0.11	0.07	2,068

High School	0.15	0.14	0.14	0.99	< 0.005	< 0.005	0.31	0.31	< 0.005	0.08	0.08	—	303	303	0.01	0.02	0.01	308
Government Office Building	1.09	1.02	1.04	7.14	0.02	0.01	2.26	2.28	0.01	0.57	0.59	—	2,193	2,193	0.09	0.12	0.08	2,231
Single Family Housing	637	592	622	4,266	13.1	8.32	1,380	1,388	7.84	350	358	—	1,335,545	1,335,545	52.2	70.9	45.9	1,358,015
Apartments Low Rise	65.7	61.1	64.2	440	1.35	0.86	142	143	0.81	36.1	36.9	—	137,783	137,783	5.38	7.31	4.73	140,101
Apartments High Rise	16.8	15.6	16.4	113	0.34	0.22	36.4	36.6	0.21	9.23	9.44	—	35,246	35,246	1.38	1.87	1.21	35,839
Total	2,660	2,506	2,195	14,925	39.3	25.7	4,077	4,102	24.2	1,033	1,057	—	4,016,960	4,016,960	201	236	136	4,092,505
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	258	246	174	1,191	2.84	1.87	277	279	1.76	70.2	72.0	—	263,555	263,555	15.0	16.4	141	268,949
Apartments Mid Rise	11.2	10.4	10.2	75.0	0.23	0.14	23.6	23.8	0.14	5.99	6.13	—	21,615	21,615	0.77	1.08	12.1	21,969
General Office Building	14.9	13.9	13.3	97.1	0.30	0.18	30.1	30.3	0.17	7.63	7.80	—	27,562	27,562	1.01	1.40	15.3	28,018
Office Park	17.1	16.0	15.3	112	0.34	0.21	34.6	34.8	0.20	8.77	8.97	—	31,689	31,689	1.16	1.60	17.6	32,214
City Park	0.18	0.17	0.16	1.20	< 0.005	< 0.005	0.37	0.37	< 0.005	0.09	0.10	—	339	339	0.01	0.02	0.19	345
Library	3.07	2.87	2.74	20.0	0.06	0.04	6.20	6.24	0.04	1.57	1.61	—	5,683	5,683	0.21	0.29	3.16	5,777
Place of Worship	0.05	0.04	0.04	0.30	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	85.9	85.9	< 0.005	< 0.005	0.05	87.3

Elementary School	0.14	0.13	0.12	0.89	< 0.005	< 0.005	0.28	0.28	< 0.005	0.07	0.07	—	253	253	0.01	0.01	0.14	258
High School	0.03	0.03	0.02	0.18	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	51.5	51.5	< 0.005	< 0.005	0.03	52.3
Government Office Building	0.14	0.13	0.13	0.94	< 0.005	< 0.005	0.29	0.29	< 0.005	0.07	0.08	—	266	266	0.01	0.01	0.15	271
Single Family Housing	117	109	107	787	2.45	1.52	248	250	1.43	62.9	64.3	—	226,888	226,888	8.07	11.3	126	230,597
Apartments Low Rise	12.1	11.3	11.1	81.2	0.25	0.16	25.6	25.8	0.15	6.49	6.64	—	23,407	23,407	0.83	1.17	13.0	23,790
Apartments High Rise	3.09	2.88	2.83	20.8	0.06	0.04	6.55	6.59	0.04	1.66	1.70	—	5,988	5,988	0.21	0.30	3.34	6,086
Total	437	413	337	2,387	6.55	4.17	653	657	3.93	166	169	—	607,382	607,382	27.3	33.6	333	618,411

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	201,287	201,287	32.6	3.95	—	203,277
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	16,686	16,686	2.70	0.33	—	16,851

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59,911	59,911	9.69	1.17	—	60,503
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	70,826	70,826	11.5	1.39	—	71,527
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	—	663	663	0.11	0.01	—	670
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	0.45	0.45	< 0.005	< 0.005	—	0.46
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.64	0.64	< 0.005	< 0.005	—	0.64
High School	—	—	—	—	—	—	—	—	—	—	—	—	0.17	0.17	< 0.005	< 0.005	—	0.18
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	265
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	191,788	191,788	31.0	3.76	—	193,684
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	13,418	13,418	2.17	0.26	—	13,550
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,646	5,646	0.91	0.11	—	5,702
Total	—	—	—	—	—	—	—	—	—	—	—	—	560,488	560,488	90.7	11.0	—	566,030
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	201,287	201,287	32.6	3.95	—	203,277

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	16,686	16,686	2.70	0.33	—	16,851
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	59,911	59,911	9.69	1.17	—	60,503
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	70,826	70,826	11.5	1.39	—	71,527
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	—	663	663	0.11	0.01	—	670
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	0.45	0.45	< 0.005	< 0.005	—	0.46
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.64	0.64	< 0.005	< 0.005	—	0.64
High School	—	—	—	—	—	—	—	—	—	—	—	—	0.17	0.17	< 0.005	< 0.005	—	0.18
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	262	262	0.04	0.01	—	265
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	191,788	191,788	31.0	3.76	—	193,684
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	13,418	13,418	2.17	0.26	—	13,550
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,646	5,646	0.91	0.11	—	5,702
Total	—	—	—	—	—	—	—	—	—	—	—	—	560,488	560,488	90.7	11.0	—	566,030
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	33,325	33,325	5.39	0.65	—	33,655

Apartments	—	—	—	—	—	—	—	—	—	—	—	—	2,763	2,763	0.45	0.05	—	2,790
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	9,919	9,919	1.60	0.19	—	10,017
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	11,726	11,726	1.90	0.23	—	11,842
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	—	110	110	0.02	< 0.005	—	111
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	0.08	0.08	< 0.005	< 0.005	—	0.08
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	0.11	0.11	< 0.005	< 0.005	—	0.11
High School	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03	< 0.005	< 0.005	—	0.03
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	43.4	43.4	0.01	< 0.005	—	43.8
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	31,753	31,753	5.14	0.62	—	32,067
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	2,221	2,221	0.36	0.04	—	2,243
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	—	935	935	0.15	0.02	—	944
Total	—	—	—	—	—	—	—	—	—	—	—	—	92,795	92,795	15.0	1.82	—	93,713

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	9.87	4.93	89.7	75.4	0.54	6.82	—	6.82	6.82	—	6.82	—	107,039	107,039	9.47	0.20	—	107,336
Apartments Mid Rise	4.51	2.26	38.6	16.4	0.25	3.12	—	3.12	3.12	—	3.12	—	48,939	48,939	4.33	0.09	—	49,074
General Office Building	5.40	2.70	49.0	41.2	0.29	3.73	—	3.73	3.73	—	3.73	—	58,524	58,524	5.18	0.11	—	58,686
Office Park	6.38	3.19	58.0	48.7	0.35	4.41	—	4.41	4.41	—	4.41	—	69,187	69,187	6.12	0.13	—	69,379
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.12	0.06	1.10	0.92	0.01	0.08	—	0.08	0.08	—	0.08	—	1,313	1,313	0.12	< 0.005	—	1,317
Place of Worship	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.90	0.90	< 0.005	< 0.005	—	0.90
Elementary School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.43	3.43	< 0.005	< 0.005	—	3.44
High School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.95	0.95	< 0.005	< 0.005	—	0.95
Government Office Building	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	256	256	0.02	< 0.005	—	257
Single Family Housing	42.2	21.1	361	154	2.30	29.2	—	29.2	29.2	—	29.2	—	457,891	457,891	40.5	0.86	—	459,161
Apartments Low Rise	3.99	2.00	34.1	14.5	0.22	2.76	—	2.76	2.76	—	2.76	—	43,287	43,287	3.83	0.08	—	43,407

Apartme High Rise	1.53	0.76	13.0	5.55	0.08	1.05	—	1.05	1.05	—	1.05	—	16,560	16,560	1.47	0.03	—	16,606
Total	74.0	37.0	645	356	4.04	51.1	—	51.1	51.1	—	51.1	—	803,001	803,001	71.1	1.51	—	805,228
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	9.87	4.93	89.7	75.4	0.54	6.82	—	6.82	6.82	—	6.82	—	107,039	107,039	9.47	0.20	—	107,336
Apartme nts Mid Rise	4.51	2.26	38.6	16.4	0.25	3.12	—	3.12	3.12	—	3.12	—	48,939	48,939	4.33	0.09	—	49,074
General Office Building	5.40	2.70	49.0	41.2	0.29	3.73	—	3.73	3.73	—	3.73	—	58,524	58,524	5.18	0.11	—	58,686
Office Park	6.38	3.19	58.0	48.7	0.35	4.41	—	4.41	4.41	—	4.41	—	69,187	69,187	6.12	0.13	—	69,379
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.12	0.06	1.10	0.92	0.01	0.08	—	0.08	0.08	—	0.08	—	1,313	1,313	0.12	< 0.005	—	1,317
Place of Worship	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.90	0.90	< 0.005	< 0.005	—	0.90
Element ary School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.43	3.43	< 0.005	< 0.005	—	3.44
High School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.95	0.95	< 0.005	< 0.005	—	0.95
Governm ent Office Building	0.02	0.01	0.21	0.18	< 0.005	0.02	—	0.02	0.02	—	0.02	—	256	256	0.02	< 0.005	—	257
Single Family Housing	42.2	21.1	361	154	2.30	29.2	—	29.2	29.2	—	29.2	—	457,891	457,891	40.5	0.86	—	459,161

Apartments	3.99	2.00	34.1	14.5	0.22	2.76	—	2.76	2.76	—	2.76	—	43,287	43,287	3.83	0.08	—	43,407
Apartments High Rise	1.53	0.76	13.0	5.55	0.08	1.05	—	1.05	1.05	—	1.05	—	16,560	16,560	1.47	0.03	—	16,606
Total	74.0	37.0	645	356	4.04	51.1	—	51.1	51.1	—	51.1	—	803,001	803,001	71.1	1.51	—	805,228
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	1.80	0.90	16.4	13.8	0.10	1.24	—	1.24	1.24	—	1.24	—	17,721	17,721	1.57	0.03	—	17,771
Apartments Mid Rise	0.82	0.41	7.04	2.99	0.04	0.57	—	0.57	0.57	—	0.57	—	8,102	8,102	0.72	0.02	—	8,125
General Office Building	0.98	0.49	8.95	7.52	0.05	0.68	—	0.68	0.68	—	0.68	—	9,689	9,689	0.86	0.02	—	9,716
Office Park	1.16	0.58	10.6	8.89	0.06	0.80	—	0.80	0.80	—	0.80	—	11,455	11,455	1.01	0.02	—	11,486
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Library	0.02	0.01	0.20	0.17	< 0.005	0.02	—	0.02	0.02	—	0.02	—	217	217	0.02	< 0.005	—	218
Place of Worship	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Elementary School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.57	0.57	< 0.005	< 0.005	—	0.57
High School	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.16	0.16	< 0.005	< 0.005	—	0.16
Government Office Building	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.4	42.4	< 0.005	< 0.005	—	42.5
Single Family Housing	7.70	3.85	65.8	28.0	0.42	5.32	—	5.32	5.32	—	5.32	—	75,809	75,809	6.71	0.14	—	76,019

Apartments	0.73	0.36	6.22	2.65	0.04	0.50	—	0.50	0.50	—	0.50	—	7,167	7,167	0.63	0.01	—	7,187
Apartments High Rise	0.28	0.14	2.38	1.01	0.02	0.19	—	0.19	0.19	—	0.19	—	2,742	2,742	0.24	0.01	—	2,749
Total	13.5	6.76	118	65.0	0.74	9.33	—	9.33	9.33	—	9.33	—	132,946	132,946	11.8	0.25	—	133,315

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2,756	2,756	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	600	560	42.2	4,758	0.24	4.68	—	4.68	3.54	—	3.54	—	15,449	15,449	0.65	0.13	—	15,504
Total	3,557	3,517	42.2	4,758	0.24	4.68	—	4.68	3.54	—	3.54	—	15,449	15,449	0.65	0.13	—	15,504
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2,756	2,756	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	201	201	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2,957	2,957	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	503	503	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	36.7	36.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	54.0	50.4	3.80	428	0.02	0.42	—	0.42	0.32	—	0.32	—	1,261	1,261	0.05	0.01	—	1,266
Total	594	590	3.80	428	0.02	0.42	—	0.42	0.32	—	0.32	—	1,261	1,261	0.05	0.01	—	1,266

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	7,069	8,120	15,189	726	17.4	—	38,521
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	469	538	1,007	48.1	1.15	—	2,554

General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,557	1,789	3,346	160	3.83	—	8,486
Office Park	—	—	—	—	—	—	—	—	—	—	—	1,841	2,115	3,956	189	4.53	—	10,032
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	6.00	6.89	12.9	0.62	0.01	—	32.7
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1.20	1.38	2.58	0.12	< 0.005	—	6.53
Elementary School	—	—	—	—	—	—	—	—	—	—	—	2.22	2.55	4.78	0.23	0.01	—	12.1
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	2.92	5.47	0.26	0.01	—	13.9
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	7.61	8.75	16.4	0.78	0.02	—	41.5
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2,835	13,014	15,850	293	7.16	—	25,304
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	377	433	811	38.7	0.93	—	2,056
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	159	182	341	16.3	0.39	—	864
Total	—	—	—	—	—	—	—	—	—	—	—	14,326	26,215	40,541	1,473	35.4	—	87,925
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	7,069	8,120	15,189	726	17.4	—	38,521

Apartments	—	—	—	—	—	—	—	—	—	—	—	469	538	1,007	48.1	1.15	—	2,554
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1,557	1,789	3,346	160	3.83	—	8,486
Office Park	—	—	—	—	—	—	—	—	—	—	—	1,841	2,115	3,956	189	4.53	—	10,032
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	6.00	6.89	12.9	0.62	0.01	—	32.7
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	1.20	1.38	2.58	0.12	< 0.005	—	6.53
Elementary School	—	—	—	—	—	—	—	—	—	—	—	2.22	2.55	4.78	0.23	0.01	—	12.1
High School	—	—	—	—	—	—	—	—	—	—	—	2.55	2.92	5.47	0.26	0.01	—	13.9
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	7.61	8.75	16.4	0.78	0.02	—	41.5
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2,835	13,014	15,850	293	7.16	—	25,304
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	377	433	811	38.7	0.93	—	2,056
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	159	182	341	16.3	0.39	—	864
Total	—	—	—	—	—	—	—	—	—	—	—	14,326	26,215	40,541	1,473	35.4	—	87,925
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	1,170	1,344	2,515	120	2.88	—	6,378

Apartments	—	—	—	—	—	—	—	—	—	—	—	77.6	89.1	167	7.97	0.19	—	423
General Office Building	—	—	—	—	—	—	—	—	—	—	—	258	296	554	26.5	0.63	—	1,405
Office Park	—	—	—	—	—	—	—	—	—	—	—	305	350	655	31.3	0.75	—	1,661
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	0.99	1.14	2.13	0.10	< 0.005	—	5.41
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	0.20	0.23	0.43	0.02	< 0.005	—	1.08
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.37	0.42	0.79	0.04	< 0.005	—	2.01
High School	—	—	—	—	—	—	—	—	—	—	—	0.42	0.48	0.91	0.04	< 0.005	—	2.30
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.26	1.45	2.71	0.13	< 0.005	—	6.87
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	469	2,155	2,624	48.5	1.19	—	4,189
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	62.5	71.7	134	6.42	0.15	—	340
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	26.3	30.2	56.4	2.70	0.06	—	143
Total	—	—	—	—	—	—	—	—	—	—	—	2,372	4,340	6,712	244	5.86	—	14,557

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	28,181	0.00	28,181	2,817	0.00	—	98,596
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,419	0.00	2,419	242	0.00	—	8,463
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,292	0.00	2,292	229	0.00	—	8,018
Office Park	—	—	—	—	—	—	—	—	—	—	—	2,709	0.00	2,709	271	0.00	—	9,479
City Park	—	—	—	—	—	—	—	—	—	—	—	16.6	0.00	16.6	1.66	0.00	—	58.0
Library	—	—	—	—	—	—	—	—	—	—	—	49.6	0.00	49.6	4.96	0.00	—	174
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	61.4	0.00	61.4	6.14	0.00	—	215
Elementary School	—	—	—	—	—	—	—	—	—	—	—	28.0	0.00	28.0	2.80	0.00	—	98.0
High School	—	—	—	—	—	—	—	—	—	—	—	28.0	0.00	28.0	2.80	0.00	—	98.0
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	10.0	0.00	10.0	1.00	0.00	—	35.1
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	17,579	0.00	17,579	1,757	0.00	—	61,501

Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,811
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	819	0.00	819	81.8	0.00	—	2,864
Total	—	—	—	—	—	—	—	—	—	—	—	56,139	0.00	56,139	5,611	0.00	—	196,410
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	28,181	0.00	28,181	2,817	0.00	—	98,596
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	2,419	0.00	2,419	242	0.00	—	8,463
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2,292	0.00	2,292	229	0.00	—	8,018
Office Park	—	—	—	—	—	—	—	—	—	—	—	2,709	0.00	2,709	271	0.00	—	9,479
City Park	—	—	—	—	—	—	—	—	—	—	—	16.6	0.00	16.6	1.66	0.00	—	58.0
Library	—	—	—	—	—	—	—	—	—	—	—	49.6	0.00	49.6	4.96	0.00	—	174
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	61.4	0.00	61.4	6.14	0.00	—	215
Elementary School	—	—	—	—	—	—	—	—	—	—	—	28.0	0.00	28.0	2.80	0.00	—	98.0
High School	—	—	—	—	—	—	—	—	—	—	—	28.0	0.00	28.0	2.80	0.00	—	98.0
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	10.0	0.00	10.0	1.00	0.00	—	35.1

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	17,579	0.00	17,579	1,757	0.00	—	61,501
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	1,947	0.00	1,947	195	0.00	—	6,811
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	819	0.00	819	81.8	0.00	—	2,864
Total	—	—	—	—	—	—	—	—	—	—	—	56,139	0.00	56,139	5,611	0.00	—	196,410
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	4,666	0.00	4,666	466	0.00	—	16,324
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	401	0.00	401	40.0	0.00	—	1,401
General Office Building	—	—	—	—	—	—	—	—	—	—	—	379	0.00	379	37.9	0.00	—	1,327
Office Park	—	—	—	—	—	—	—	—	—	—	—	449	0.00	449	44.8	0.00	—	1,569
City Park	—	—	—	—	—	—	—	—	—	—	—	2.75	0.00	2.75	0.27	0.00	—	9.61
Library	—	—	—	—	—	—	—	—	—	—	—	8.22	0.00	8.22	0.82	0.00	—	28.7
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	10.2	0.00	10.2	1.02	0.00	—	35.6
Elementary School	—	—	—	—	—	—	—	—	—	—	—	4.64	0.00	4.64	0.46	0.00	—	16.2
High School	—	—	—	—	—	—	—	—	—	—	—	4.64	0.00	4.64	0.46	0.00	—	16.2
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.66	0.00	1.66	0.17	0.00	—	5.81

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	2,910	0.00	2,910	291	0.00	—	10,182
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—	—	322	0.00	322	32.2	0.00	—	1,128
Apartments High Rise	—	—	—	—	—	—	—	—	—	—	—	136	0.00	136	13.5	0.00	—	474
Total	—	—	—	—	—	—	—	—	—	—	—	9,294	0.00	9,294	929	0.00	—	32,518

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	164	164
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.7	41.7
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.1	11.1
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.1	13.1
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.39	0.39

Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Element ary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Governm ent Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	513	513
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	37.1
Apartme nts High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.1	14.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	794	794
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	164	164
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	41.7	41.7
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.1	11.1
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.1	13.1
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.39	0.39
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Element ary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Governm ent Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05	0.05
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	513	513
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	37.1
Apartme nts High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14.1	14.1
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	794	794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Regional Shopping Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.1	27.1
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.91	6.91
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.84	1.84
Office Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.18	2.18
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

Library	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Place of Worship	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Element ary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
High School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Governm ent Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	84.9	84.9
Apartme nts Low Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.14	6.14
Apartme nts High Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.34	2.34
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	131	131

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2025	3/31/2025	5.00	21.0	—
Site Preparation	Site Preparation	4/1/2025	6/30/2025	5.00	65.0	—

Grading	Grading	7/1/2025	9/29/2025	5.00	65.0	—
Building Construction	Building Construction	3/1/2025	12/31/2035	5.00	2,826	—
Paving	Paving	12/30/2025	4/27/2026	5.00	85.0	—
Architectural Coating	Architectural Coating	12/30/2025	12/31/2035	5.00	2,610	—
Underground Utilities	Trenching	9/30/2025	12/29/2025	5.00	65.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37

Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	7.70	LDA,LDT1,LDT2
Demolition	Vendor	—	4.00	HHDT,MHDT
Demolition	Hauling	548	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	7.70	LDA,LDT1,LDT2
Site Preparation	Vendor	—	4.00	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	7.70	LDA,LDT1,LDT2
Grading	Vendor	—	4.00	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	36,740	7.70	LDA,LDT1,LDT2
Building Construction	Vendor	12,561	4.00	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	7.70	LDA,LDT1,LDT2
Paving	Vendor	—	4.00	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7,348	7.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	4.00	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Underground Utilities	—	—	—	—
Underground Utilities	Worker	0.00	7.70	LDA,LDT1,LDT2
Underground Utilities	Vendor	—	4.00	HHDT,MHDT
Underground Utilities	Hauling	0.00	20.0	HHDT
Underground Utilities	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	171,264,962	57,088,321	66,307,640	22,102,547	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,000,000	—
Site Preparation	0.00	0.00	97.5	0.00	—
Grading	0.00	0.00	195	0.00	—
Paving	0.00	0.00	0.00	0.00	405

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Regional Shopping Center	0.00	0%
Regional Shopping Center	0.00	0%
Regional Shopping Center	0.00	0%
Regional Shopping Center	0.00	0%
Apartments Mid Rise	—	0%
General Office Building	0.00	0%
Office Park	0.00	0%
Office Park	0.00	0%
Apartments Mid Rise	—	0%
Regional Shopping Center	0.00	0%
Apartments Mid Rise	—	0%
Regional Shopping Center	0.00	0%
Apartments Mid Rise	—	0%

Regional Shopping Center	0.00	0%
City Park	0.00	0%
Library	0.00	0%
Place of Worship	0.00	0%
Elementary School	0.00	0%
Elementary School	0.00	0%
High School	0.00	0%
High School	0.00	0%
Government Office Building	0.00	0%
Single Family Housing	19.8	0%
Single Family Housing	97.4	0%
Single Family Housing	287	0%
Apartments Low Rise	—	0%
Apartments Mid Rise	—	0%
Apartments High Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005
2030	0.00	204	0.03	< 0.005
2031	0.00	204	0.03	< 0.005
2032	0.00	204	0.03	< 0.005

2033	0.00	204	0.03	< 0.005
2034	0.00	204	0.03	< 0.005
2035	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Regional Shopping Center	30,828	30,828	30,828	11,252,210	101,244	113,132	113,132	38,193,861
Regional Shopping Center	11,217	11,217	11,217	4,094,256	36,839	41,165	41,165	13,897,308
Regional Shopping Center	184,314	184,314	184,314	67,274,782	605,318	676,397	676,397	228,353,683
Regional Shopping Center	2,299	2,299	2,299	839,173	7,551	8,437	8,437	2,848,441
Apartments Mid Rise	1,383	1,383	1,383	504,839	10,401	10,401	10,401	3,796,193
General Office Building	33,423	33,423	33,423	12,199,348	236,971	236,971	236,971	86,494,457
Office Park	30,468	30,468	30,468	11,120,866	216,022	216,022	216,022	78,847,926
Office Park	7,960	7,960	7,960	2,905,256	56,434	56,434	56,434	20,598,520
Apartments Mid Rise	57.1	57.1	57.1	20,849	430	430	430	156,775
Regional Shopping Center	186,014	186,014	186,014	67,894,935	610,898	682,632	682,632	230,458,698
Apartments Mid Rise	69.4	69.4	69.5	25,325	522	522	523	190,436
Regional Shopping Center	189,668	189,668	321,187	76,086,502	622,899	696,042	1,178,691	260,152,685
Apartments Mid Rise	4.08	4.08	4.09	1,490	30.7	30.7	30.8	11,202
Regional Shopping Center	16,165	16,165	27,374	6,484,791	53,089	59,323	100,459	22,172,602

City Park	279	701	784	150,187	1,979	4,972	5,556	1,064,836
Library	7,205	8,009	4,209	2,515,528	51,084	56,785	29,842	17,835,316
Place of Worship	104	104	104	38,033	739	739	739	269,657
Elementary School	390	0.00	0.00	101,783	2,768	0.00	0.00	721,649
Elementary School	28.4	28.4	28.4	10,366	201	201	201	73,496
High School	32.0	32.0	32.0	11,680	227	227	227	82,812
High School	30.4	30.4	30.4	11,096	216	216	216	78,672
Government Office Building	452	0.00	0.00	117,791	3,203	0.00	0.00	835,147
Single Family Housing	12,744	12,744	12,744	4,651,560	95,830	95,830	95,830	34,977,933
Single Family Housing	62,552	62,552	62,552	22,831,407	470,365	470,365	470,365	171,683,353
Single Family Housing	184,661	184,661	184,661	67,401,104	1,388,576	1,388,576	1,388,576	506,830,245
Apartments Low Rise	26,819	26,819	26,819	9,788,807	201,666	201,666	201,666	73,608,046
Apartments Mid Rise	23,252	23,252	23,252	8,486,951	174,845	174,845	174,845	63,818,589
Apartments High Rise	6,860	6,860	6,860	2,504,031	51,587	51,587	51,587	18,829,348

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
171264962.25	57,088,321	66,307,640	22,102,547	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Regional Shopping Center	26,127,277	204	0.0330	0.0040	24,227,771
Regional Shopping Center	436	204	0.0330	0.0040	405
Regional Shopping Center	1,645	204	0.0330	0.0040	1,526
Regional Shopping Center	1,948,536	204	0.0330	0.0040	1,806,873
Apartments Mid Rise	1,667,472	204	0.0330	0.0040	8,528,128
General Office Building	107,201,815	204	0.0330	0.0040	182,609,979
Office Park	76,566,683	204	0.0330	0.0040	130,425,406
Office Park	50,167,725	204	0.0330	0.0040	85,456,829
Apartments Mid Rise	68,863	204	0.0330	0.0040	352,194
Regional Shopping Center	157,649,907	204	0.0330	0.0040	146,188,440
Apartments Mid Rise	83,620	204	0.0330	0.0040	427,664
Regional Shopping Center	160,746,904	204	0.0330	0.0040	149,060,280
Apartments Mid Rise	4,919	204	0.0330	0.0040	25,157
Regional Shopping Center	13,700,332	204	0.0330	0.0040	12,704,290
City Park	0.00	204	0.0330	0.0040	0.00
Library	1,186,413	204	0.0330	0.0040	4,097,232
Place of Worship	813	204	0.0330	0.0040	2,809

Elementary School	440	204	0.0330	0.0040	4,145
Elementary School	697	204	0.0330	0.0040	6,563
High School	225	204	0.0330	0.0040	2,120
High School	88.1	204	0.0330	0.0040	829
Government Office Building	468,928	204	0.0330	0.0040	798,782
Single Family Housing	16,823,846	204	0.0330	0.0040	70,042,175
Single Family Housing	82,577,046	204	0.0330	0.0040	343,790,344
Single Family Housing	243,777,534	204	0.0330	0.0040	1,014,911,120
Apartments Low Rise	24,009,265	204	0.0330	0.0040	135,067,694
Apartments Mid Rise	28,032,217	204	0.0330	0.0040	143,368,153
Apartments High Rise	10,103,206	204	0.0330	0.0040	51,671,905

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Regional Shopping Center	183,266,914	0.00
Regional Shopping Center	66,683,931	0.00
Regional Shopping Center	1,095,717,323	0.00
Regional Shopping Center	13,667,774	0.00
Apartments Mid Rise	13,660,344	0.00
General Office Building	812,636,399	0.00
Office Park	580,408,820	0.00
Office Park	380,293,102	0.00
Apartments Mid Rise	564,144	0.00
Regional Shopping Center	1,105,817,885	0.00
Apartments Mid Rise	685,032	0.00

Regional Shopping Center	1,127,541,415	0.00
Apartments Mid Rise	40,296	0.00
Regional Shopping Center	96,099,438	0.00
City Park	0.00	0.00
Library	3,128,891	0.00
Place of Worship	625,778	0.00
Elementary School	579,938	0.00
Elementary School	579,938	0.00
High School	664,093	0.00
High School	664,093	0.00
Government Office Building	3,973,194	0.00
Single Family Housing	72,532,800	353,726,698
Single Family Housing	356,015,160	1,736,208,518
Single Family Housing	1,051,000,272	5,125,499,757
Apartments Low Rise	196,845,960	0.00
Apartments Mid Rise	229,646,904	0.00
Apartments High Rise	82,767,984	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Regional Shopping Center	2,598	—
Regional Shopping Center	945	—
Regional Shopping Center	15,532	—
Regional Shopping Center	194	—
Apartments Mid Rise	251	—

General Office Building	4,252	—
Office Park	3,037	—
Office Park	1,990	—
Apartments Mid Rise	10.4	—
Regional Shopping Center	15,675	—
Apartments Mid Rise	12.5	—
Regional Shopping Center	15,983	—
Apartments Mid Rise	0.69	—
Regional Shopping Center	1,362	—
City Park	30.8	—
Library	92.1	—
Place of Worship	114	—
Elementary School	26.0	—
Elementary School	26.0	—
High School	26.0	—
High School	26.0	—
Government Office Building	18.6	—
Single Family Housing	1,599	—
Single Family Housing	7,848	—
Single Family Housing	23,169	—
Apartments Low Rise	3,612	—
Apartments Mid Rise	4,214	—
Apartments High Rise	1,519	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

Office Park	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Office Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Regional Shopping Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Regional Shopping Center	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
Library	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Library	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Library	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Library	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Place of Worship	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Place of Worship	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Place of Worship	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Place of Worship	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
High School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
High School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
High School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00
High School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Apartments High Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments High Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.7	annual days of extreme heat
Extreme Precipitation	1.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	N/A
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The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	76.9
AQ-PM	93.0
AQ-DPM	89.3
Drinking Water	92.7
Lead Risk Housing	32.1
Pesticides	87.9
Toxic Releases	66.4
Traffic	64.4
Effect Indicators	—
CleanUp Sites	29.4
Groundwater	0.00
Haz Waste Facilities/Generators	64.6
Impaired Water Bodies	23.9
Solid Waste	77.6
Sensitive Population	—
Asthma	83.3
Cardio-vascular	59.9
Low Birth Weights	40.1
Socioeconomic Factor Indicators	—
Education	73.8
Housing	56.0
Linguistic	61.1
Poverty	67.4
Unemployment	81.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	41.5629411
Employed	46.86256897
Median HI	54.54895419
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	16.32234056
Transportation	—
Auto Access	71.35891184
Active commuting	11.25368921
Social	—
2-parent households	24.91979982
Voting	29.71897857
Neighborhood	—
Alcohol availability	79.37892981
Park access	12.78070063
Retail density	26.40831515
Supermarket access	21.87860901
Tree canopy	2.55357372
Housing	—
Homeownership	62.4534839
Housing habitability	70.99961504
Low-inc homeowner severe housing cost burden	89.76004106
Low-inc renter severe housing cost burden	65.18670602
Uncrowded housing	32.04157577

Health Outcomes	—
Insured adults	52.48299756
Arthritis	83.7
Asthma ER Admissions	30.8
High Blood Pressure	70.1
Cancer (excluding skin)	85.3
Asthma	37.3
Coronary Heart Disease	83.6
Chronic Obstructive Pulmonary Disease	68.2
Diagnosed Diabetes	55.5
Life Expectancy at Birth	24.5
Cognitively Disabled	41.3
Physically Disabled	60.6
Heart Attack ER Admissions	20.7
Mental Health Not Good	37.4
Chronic Kidney Disease	79.8
Obesity	44.9
Pedestrian Injuries	43.0
Physical Health Not Good	48.3
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	48.9
Current Smoker	47.6
No Leisure Time for Physical Activity	34.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	19.9
Elderly	85.6
English Speaking	37.8
Foreign-born	34.4
Outdoor Workers	35.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.6
Traffic Density	57.6
Traffic Access	0.0
Other Indices	—
Hardship	71.3
Other Decision Support	—
2016 Voting	26.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	90.0
Healthy Places Index Score for Project Location (b)	35.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Land Use - Land uses, unit amounts, and acreages are consistent with VMT analysis and Table 2.0-3 of the Chapter 2.0: Projection Description of the Recirculated Draft EIR.
Construction: Construction Phases	Construction schedule assumed based on project characteristics. Actual construction schedule will depend on market conditions.
Operations: Vehicle Data	Vehicle Trips - Operational mobile trip rates as provided by Kittelson & Associates (VMT Analysis).
Operations: Hearths	No fireplaces/hearths or woodstoves.

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: County
Region: Fresno
Calendar Year: 2025, 2035
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	Fuel Consumption	MPG	
Fresno	2025	All Other Buses	Aggregate	Aggregate	Diesel	100.5260792	5369.400482	894.6821	0.608840767	8.8191	
Fresno	2025	LDA	Aggregate	Aggregate	Gasoline	316061.7189	12141533.24	1465880	402.2140566	30.1867	
Fresno	2025	LDA	Aggregate	Aggregate	Diesel	664.1610576	19482.6747	2790.563	0.43338164	44.9550	
Fresno	2025	LDT1	Aggregate	Aggregate	Gasoline	29804.00447	969835.576	128564.1	38.94444053	24.9031	
Fresno	2025	LDT1	Aggregate	Aggregate	Diesel	16.92722929	189.0849739	47.84291	0.007454601	25.3649	
Fresno	2025	LDT2	Aggregate	Aggregate	Gasoline	148873.0637	5788459.351	690571.5	236.5988227	24.4653	
Fresno	2025	LDT2	Aggregate	Aggregate	Diesel	403.4049479	16923.85816	1923.28	0.48308615	35.0328	
Fresno	2025	LHD1	Aggregate	Aggregate	Gasoline	12157.40146	436975.8691	181127.2	45.27577145	9.6514	
Fresno	2025	LHD1	Aggregate	Aggregate	Diesel	10824.69883	383946.9386	136161.1	24.24444468	15.8365	
Fresno	2025	LHD2	Aggregate	Aggregate	Gasoline	1993.211327	67578.33936	29695.88	8.022756778	8.4233	
Fresno	2025	LHD2	Aggregate	Aggregate	Diesel	4061.658904	146655.6498	51090.56	11.10918097	13.2013	
Fresno	2025	MCY	Aggregate	Aggregate	Gasoline	15807.73915	85788.09591	31615.48	2.073776267	41.3681	
Fresno	2025	MDV	Aggregate	Aggregate	Gasoline	128955.2326	4501805.71	582404.8	228.9602591	19.6620	
Fresno	2025	MDV	Aggregate	Aggregate	Diesel	1856.856283	68763.29623	8556.807	2.716088295	25.3170	
Fresno	2025	MH	Aggregate	Aggregate	Gasoline	1410.944044	12598.47464	141.1508	2.855559617	4.4119	
Fresno	2025	MH	Aggregate	Aggregate	Diesel	712.5202071	6290.416056	71.25202	0.669368063	9.3975	
Fresno	2025	Motor Coach	Aggregate	Aggregate	Diesel	55.07184991	7362.573888	1265.551	1.326168897	5.5518	
Fresno	2025	OBUS	Aggregate	Aggregate	Gasoline	286.8972081	13693.05956	5740.239	2.864799604	4.7798	
Fresno	2025	PTO	Aggregate	Aggregate	Diesel	0	18665.92333	0	3.676012074	5.0778	
Fresno	2025	SBUS	Aggregate	Aggregate	Gasoline	313.8974588	18730.3491	1255.59	1.869954486	10.0165	
Fresno	2025	SBUS	Aggregate	Aggregate	Diesel	852.8364713	19141.59945	12349.07	2.294887278	8.3410	MHD
Fresno	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	15.21367728	1006.396174	349.6103	0.111856024	8.9972	8.5793
Fresno	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	20.14999217	1382.884552	463.0468	0.153786385	8.9922	
Fresno	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	67.98773131	3588.940802	1562.358	0.392899925	9.1345	
Fresno	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	112.315003	22749.00933	2580.999	2.315934224	9.8228	
Fresno	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	295.4039173	9934.667503	4215.414	1.202618647	8.2609	
Fresno	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	371.7663062	12625.28494	5305.105	1.527809101	8.2637	
Fresno	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	854.4874401	28944.55424	12193.54	3.48285642	8.3106	
Fresno	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	334.7301025	18168.194	4776.599	2.144356676	8.4726	
Fresno	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	582.2105538	24165.83421	6730.354	2.825615841	8.5524	
Fresno	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1455.842454	62839.8269	16829.54	7.312404304	8.5936	
Fresno	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	1307.089641	55153.23091	15109.96	6.414268763	8.5985	
Fresno	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	802.7885655	34675.34899	9280.236	3.957893602	8.7611	
Fresno	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	12.30837618	612.6489335	142.2848	0.068402076	8.9566	
Fresno	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	931.7252006	57134.35695	10770.74	6.164210012	9.2687	
Fresno	2025	T6 OOS Class 4	Aggregate	Aggregate	Diesel	9.008609657	591.6976558	207.0178	0.064995019	9.1037	
Fresno	2025	T6 OOS Class 5	Aggregate	Aggregate	Diesel	11.87204361	811.7027823	272.8196	0.089329357	9.0866	
Fresno	2025	T6 OOS Class 6	Aggregate	Aggregate	Diesel	40.35896813	2121.002593	927.4491	0.228641805	9.2765	
Fresno	2025	T6 OOS Class 7	Aggregate	Aggregate	Diesel	61.18884067	15422.3263	1406.12	1.556590032	9.9078	
Fresno	2025	T6 Public Class 4	Aggregate	Aggregate	Diesel	78.83425675	2669.261421	404.4197	0.348893666	7.6506	
Fresno	2025	T6 Public Class 5	Aggregate	Aggregate	Diesel	107.8289142	3897.274428	553.1623	0.501459838	7.7719	
Fresno	2025	T6 Public Class 6	Aggregate	Aggregate	Diesel	133.4617956	4803.324992	684.659	0.618306621	7.7685	
Fresno	2025	T6 Public Class 7	Aggregate	Aggregate	Diesel	279.5414077	13012.71769	1434.047	1.636559142	7.9513	
Fresno	2025	T6 Utility Class 5	Aggregate	Aggregate	Diesel	59.26291174	2400.92174	758.5653	0.269851859	8.8972	
Fresno	2025	T6 Utility Class 6	Aggregate	Aggregate	Diesel	11.22779799	453.0334074	143.7158	0.050767399	8.9237	
Fresno	2025	T6 Utility Class 7	Aggregate	Aggregate	Diesel	12.7066515	629.2746515	162.6451	0.070005586	8.9889	
Fresno	2025	T6TS	Aggregate	Aggregate	Gasoline	910.5276922	51143.17052	18217.84	10.76905535	4.7491	HHD
Fresno	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	2763.67637	560479.9928	63509.28	90.4116714	6.1992	5.5669
Fresno	2025	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	2479.663906	670487.67	56982.68	105.1163191	6.3785	
Fresno	2025	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	1050.715929	243576.2607	24145.45	39.11335977	6.2274	
Fresno	2025	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	55.60421055	10324.08611	909.6849	1.726437795	5.9800	
Fresno	2025	T7 POAK Class 8	Aggregate	Aggregate	Diesel	245.7514405	24463.94797	4020.494	4.173681018	5.8615	
Fresno	2025	T7 POLA Class 8	Aggregate	Aggregate	Diesel	295.7103164	37273.55588	4837.821	6.421219305	5.8047	
Fresno	2025	T7 Public Class 8	Aggregate	Aggregate	Diesel	546.4145697	23951.54763	2803.107	4.537634161	5.2784	
Fresno	2025	T7 Single Concrete/Transit M	Aggregate	Aggregate	Diesel	234.1304592	16133.04116	2205.509	2.71003333	5.9531	
Fresno	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	286.254496	17037.97892	2696.517	2.948140201	5.7792	
Fresno	2025	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1165.945568	57921.96574	10983.21	9.774131586	5.9260	
Fresno	2025	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	340.119895	22049.15003	1564.552	8.586353761	2.5679	
Fresno	2025	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	5387.643815	394186.9895	78282.46	64.11404396	6.1482	
Fresno	2025	T7 Utility Class 8	Aggregate	Aggregate	Diesel	43.20507976	1920.102537	553.025	0.328864039	5.8386	
Fresno	2025	T7IS	Aggregate	Aggregate	Gasoline	0.792491733	73.54576459	15.85617	0.018412582	3.9943	
Fresno	2025	UBUS	Aggregate	Aggregate	Gasoline	90.5416307	4240.000315	362.1665	0.879634961	4.8202	
Fresno	2025	UBUS	Aggregate	Aggregate	Diesel	19.41057964	1997.704052	77.64232	0.218517674	9.1421	
Fresno	2035	All Other Buses	Aggregate	Aggregate	Diesel	107.1956075	5563.714913	954.0409	0.580902855	9.5777	

Fresno	2035 LDA	Aggregate	Aggregate	Gasoline	332166.7063	12537991.85	1540171	354.7016131	35.3480	
Fresno	2035 LDA	Aggregate	Aggregate	Diesel	286.7431254	9003.295242	1255.852	0.168173161	53.5359	
Fresno	2035 LDT1	Aggregate	Aggregate	Gasoline	25232.01169	847528.6531	110907.8	28.80075352	29.4273	
Fresno	2035 LDT1	Aggregate	Aggregate	Diesel	0.346248779	9.234181525	1.320645	0.000307956	29.9854	
Fresno	2035 LDT2	Aggregate	Aggregate	Gasoline	180686.3839	6770120.772	832570.4	232.6073221	29.1054	
Fresno	2035 LDT2	Aggregate	Aggregate	Diesel	624.0256578	24399.45278	2929.479	0.602477156	40.4986	
Fresno	2035 LHD1	Aggregate	Aggregate	Gasoline	10106.40841	348691.4649	150570.4	32.31782953	10.7894	
Fresno	2035 LHD1	Aggregate	Aggregate	Diesel	8006.569021	254862.8446	100712.6	15.69584568	16.2376	
Fresno	2035 LHD2	Aggregate	Aggregate	Gasoline	1373.38315	43477.25842	20461.36	4.672807091	9.3043	
Fresno	2035 LHD2	Aggregate	Aggregate	Diesel	3439.855543	109475.6845	43269.06	7.920527017	13.8218	
Fresno	2035 MCY	Aggregate	Aggregate	Gasoline	15506.93871	81670.28098	31013.88	1.896988788	43.0526	
Fresno	2035 MDV	Aggregate	Aggregate	Gasoline	119920.6036	4095578.246	539027.2	173.5701403	23.5961	
Fresno	2035 MDV	Aggregate	Aggregate	Diesel	1555.789365	50957.4211	6942.706	1.740733525	29.2735	
Fresno	2035 MH	Aggregate	Aggregate	Gasoline	985.3942038	9744.79648	98.57884	2.206448075	4.4165	
Fresno	2035 MH	Aggregate	Aggregate	Diesel	656.2244679	5686.604599	65.62245	0.607754218	9.3568	
Fresno	2035 Motor Coach	Aggregate	Aggregate	Diesel	64.3381191	7781.281028	1478.49	1.281715131	6.0710	
Fresno	2035 OBUS	Aggregate	Aggregate	Gasoline	187.6337364	6850.341535	3754.176	1.325535726	5.1680	
Fresno	2035 PTO	Aggregate	Aggregate	Diesel	0	16243.9082	0	2.911296964	5.5796	
Fresno	2035 SBUS	Aggregate	Aggregate	Gasoline	297.6317831	17373.62484	1190.527	1.709965034	10.1602	
Fresno	2035 SBUS	Aggregate	Aggregate	Diesel	741.7856547	15471.15853	10741.06	1.795607808	8.6161	MHD
Fresno	2035 T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	12.07765545	820.3229048	277.5445	0.085371199	9.6089	9.2089
Fresno	2035 T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	15.11711523	1134.13119	347.3913	0.118168866	9.5975	
Fresno	2035 T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	64.68296094	2892.333175	1486.414	0.300334001	9.6304	
Fresno	2035 T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	118.7908827	23672.61012	2729.814	2.161101828	10.9540	
Fresno	2035 T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	279.1034293	9118.614624	3982.806	1.038571227	8.7800	
Fresno	2035 T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	356.2977978	11609.19222	5084.37	1.325089048	8.7611	
Fresno	2035 T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	816.1972599	26625.95756	11647.13	3.027968083	8.7933	
Fresno	2035 T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	392.7368991	19326.21787	5604.356	2.22858497	8.6720	
Fresno	2035 T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	560.2839575	21679.08295	6476.883	2.370563765	9.1451	
Fresno	2035 T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1462.645442	56453.10198	16908.18	6.175644453	9.1412	
Fresno	2035 T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	1281.397974	49695.43918	14812.96	5.428626351	9.1543	
Fresno	2035 T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	924.2239343	33405.47775	10684.03	3.703413091	9.0202	
Fresno	2035 T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	12.09977141	546.6954833	139.8734	0.058568013	9.3344	
Fresno	2035 T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	1188.257972	63907.74751	13736.26	6.515751191	9.8082	
Fresno	2035 T6 OOS Class 4	Aggregate	Aggregate	Diesel	10.33131337	742.3582706	237.4136	0.071841104	10.3333	
Fresno	2035 T6 OOS Class 5	Aggregate	Aggregate	Diesel	12.81578313	1018.382053	294.5067	0.098705165	10.3174	
Fresno	2035 T6 OOS Class 6	Aggregate	Aggregate	Diesel	56.2409459	2661.061442	1292.417	0.256717003	10.3657	
Fresno	2035 T6 OOS Class 7	Aggregate	Aggregate	Diesel	71.24541964	19349.22569	1637.22	1.695952294	11.4091	
Fresno	2035 T6 Public Class 4	Aggregate	Aggregate	Diesel	61.34587354	2185.836919	314.7043	0.265027151	8.2476	
Fresno	2035 T6 Public Class 5	Aggregate	Aggregate	Diesel	93.44629226	3271.1271	479.3795	0.396914992	8.2414	
Fresno	2035 T6 Public Class 6	Aggregate	Aggregate	Diesel	111.796462	3971.617079	573.5159	0.480533126	8.2650	
Fresno	2035 T6 Public Class 7	Aggregate	Aggregate	Diesel	258.1163185	10866.24632	1324.137	1.280397607	8.4866	
Fresno	2035 T6 Utility Class 5	Aggregate	Aggregate	Diesel	42.24059331	1672.449115	540.6796	0.178609525	9.3637	
Fresno	2035 T6 Utility Class 6	Aggregate	Aggregate	Diesel	7.972984038	316.2358562	102.0542	0.033737514	9.3734	
Fresno	2035 T6 Utility Class 7	Aggregate	Aggregate	Diesel	8.821782925	420.752691	112.9188	0.044599654	9.4340	
Fresno	2035 T6TS	Aggregate	Aggregate	Gasoline	644.6262138	34406.49126	12897.68	6.625470045	5.1931	HHD
Fresno	2035 T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	2874.514033	587630.02	66056.33	81.75820045	7.1874	6.2513
Fresno	2035 T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	2972.765461	841505.15	68314.15	110.8870329	7.5889	
Fresno	2035 T7 NOOS Class 8	Aggregate	Aggregate	Diesel	1285.67931	305703.8734	29544.91	40.95244994	7.4648	
Fresno	2035 T7 Other Port Class 8	Aggregate	Aggregate	Diesel	47.30923378	12594.11767	773.9791	1.774819189	7.0960	
Fresno	2035 T7 POAK Class 8	Aggregate	Aggregate	Diesel	229.2305253	26207.86517	3750.211	3.80966435	6.8793	
Fresno	2035 T7 POLA Class 8	Aggregate	Aggregate	Diesel	274.1799541	51106.34918	4485.584	7.953642502	6.4255	
Fresno	2035 T7 Public Class 8	Aggregate	Aggregate	Diesel	495.6086534	20170.06613	2542.472	3.539835051	5.6980	
Fresno	2035 T7 Single Concrete/Transit M	Aggregate	Aggregate	Diesel	170.3096958	10920.49932	1604.317	1.678344904	6.5067	
Fresno	2035 T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	283.9368322	13868.62249	2674.685	2.25756631	6.1432	
Fresno	2035 T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1468.316702	54267.23818	13831.54	8.749548437	6.2023	
Fresno	2035 T7 SWCV Class 8	Aggregate	Aggregate	Diesel	229.5139668	14889.55779	1055.764	5.347664936	2.7843	
Fresno	2035 T7 Tractor Class 8	Aggregate	Aggregate	Diesel	7280.867852	448250.8191	105791	65.72933965	6.8196	
Fresno	2035 T7 Utility Class 8	Aggregate	Aggregate	Diesel	39.11053968	1615.102959	500.6149	0.262529028	6.1521	
Fresno	2035 T7IS	Aggregate	Aggregate	Gasoline	0.639299237	99.48637112	12.7911	0.021768441	4.5702	
Fresno	2035 UBUS	Aggregate	Aggregate	Gasoline	36.72466788	661.2086322	146.8987	0.115631345	5.7182	
Fresno	2035 UBUS	Aggregate	Aggregate	Diesel	10.66996297	1398.384056	42.67985	0.167820445	8.3326	

On-road Mobile (Operational) Energy Usage

Unmitigated:

Step 1:

Therefore:
Average Daily VMT:
1,858,052,536 Source: CalEEMod

Step 2:

Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
47.7598%	3.2089%	23.5291%	15.9231%	2.6124%	0.6857%	1.3970%	2.5036%	0.0488%	0.0338%	1.9221%	0.1723%	0.2035%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2035 (EMFAC2021 Output)

LDA	LDT1	LDT2	MDV	MCY	MH
35.34799784	29.42731	29.10536	23.59609919	43.05259025	4.416508409

Diesel MPG Factors for each Vehicle Class - Year 2035 (EMFAC2021 Output)

LHD1	LHD2	MHD	HHD	OBUS	UBUS	SBUS
16.23759877	13.82177	9.208882	6.251314913	5.167979559	8.332620347	8.616112

Therefore:

Weighted Average MPG Factors

Gasoline:	31.6	Diesel:	11.0
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Step 3:

Therefore:

54,372,446	daily gallons of gasoline	12,604,267	daily gallons of diesel
or			
19,845,942,964	annual gallons of gasoline	4,600,557,316	annual gallons of diesel

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source. Demolition, Site preparation and grading off-road mobile vehicle on-site gallons of fuel are calculated below.

Given Factor:	384.6	metric tons	CO2	(provided in CalEEMod Output File)
Conversion Factor:	2204.6262	pounds	per metric ton	
Intermediate Result:	847,950	pounds	CO2	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	37,888.76	gallons	diesel fuel	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Demolition	32.7366

On-road Mobile (Construction) Energy Usage - Demolition

Step 1: **Total Daily Worker Trips (CalEEMod output)**

15

Worker Trip Length (miles) (CalEEMod output)

7.7

Therefore:

Average Worker Daily VMT:

116

Step 2: **Given:**

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEE

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.435460

Step 3: **Therefore:**

4.2 Worker daily gallons of gasoline (all workers)

Step 4: **21 # of Days (CalEEMod output)**

Therefore:

Result: 88 Total gallons of gasoline (all workers)

On-road Mobile (Construction) Energy Usage - Site Preparation

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

7.7

Therefore:

Average Worker Daily VMT:

139

Step 2: **Given:**

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.4

Step 3: **Therefore:**

5.1 Worker daily gallons of gasoline

Step 4: 65 # of Days (CalEEMod Output)

Therefore:

Result: 328 Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Grading

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

20

Worker Trip Length (miles) (CalEEMod Output)

7.7

Therefore:

Average Worker Daily VMT:

154

Step 2: **Given:**

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.4

Step 3: **Therefore:**

5.6 Worker daily gallons of gasoline

Step 4: **65 # of Days (CalEEMod Output)**

Therefore:

Result: 365 Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Underground Utilities

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

0

Worker Trip Length (miles) (CalEEMod Output)

7.7

Therefore:

Average Worker Daily VMT:

-

Step 2: **Given:**

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.4

Step 3: **Therefore:**

0.0 Worker daily gallons of gasoline

Step 4: **65 # of Days (CalEEMod Output)**

Therefore:

Result: - Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Paving

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

7.7

Therefore:

Average Worker Daily VMT:

116

Step 2: **Given:**

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.4

Step 3: **Therefore:**

4.2 Worker daily gallons of gasoline

Step 4: **85 # of Days (CalEEMod Output)**

Therefore:

Result: 358 Total gallons of gasoline

On-road Mobile (Construction) Energy Usage - Building Construction

Step 1:	Total Daily Worker Trips (CalEEMod Output)			Total Daily Vendor Trips (CalEEMod Output)		
	36,740	5%	1837	12,561	5%	628
	Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.					
	Worker Trip Length (miles) (CalEEMod Output)			Vendor Trip Length (miles) (CalEEMod Output)		
	7.7			4		
	Therefore:					
	Average Worker Daily VMT:			Average Vendor Daily VMT:		
	14,145			2,512		
Step 2:	Given:					
	Assumed Fleet Mix for Workers			(Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)		
	LDA	LDT1	LDT2	Fleet Mix for Workers (CalEEMod Output)		
	0.5	0.25	0.25	MHD	HHD	
	Assumed Fleet Mix for Vendors			0%	100%	
	And:					
	MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)					
	<u>Gasoline:</u>			<u>Diesel:</u>		
	LDA	LDT1	LDT2	MHD	HHD	
	30.1867452	24.903056	24.465292	8.579276954	5.566945	
	Therefore:					
	Weighted Average Worker (Gasoline) MPG Factor			Weighted Average Vendor (Diesel) MPG Factor		
	27.4			5.6		
Step 3:	Therefore:			Therefore:		
	516	Worker daily gallons of gasoline		451	Vendor daily gallons of diesel	
Step 4:	2826	# of Days (CalEEMod Output)				
	Therefore:					
	1,457,011	Total gallons of gasoline				
				1,275,284	Total gallons of diesel	

On-road Mobile (Construction) Energy Usage - Architectural Coating

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

7,348	5%	367
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Note: Assumes 5% of Plan Area under construction at given point in time (on average) until buildout.

Worker Trip Length (miles) (CalEEMod Output)

7.7

Therefore:

Average Worker Daily VMT:

2,829

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 output)

LDA	LDT1	LDT2
30.186745	24.903056	24.465292

Therefore:

Weighted Average Worker MPG Factor

27.4

Step 3: **Therefore:**

103.1 Worker daily gallons of gasoline

Step 4: **2,610 # of Days (CalEEMod Output)**

Therefore:

Result: 269,129 Total gallons of gasoline

APPENDIX C

Cultural and Paleontological Resource Assessment



CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT FOR THE FRESNO WEST AREA SPECIFIC PLAN PROJECT, CITY OF FRESNO, FRESNO COUNTY, CALIFORNIA

Prepared for:

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Kim Scott, M.S., Principal Investigator for Paleontology

October 2019

Cogstone Project Number: 4669

Type of Study: Cultural and Paleontological Resources Assessment

Sites: P-10-3110, P-10-3111, P-10-3112, P-10-3113, P-10-3114, P-10-3115, P-10-3116, P-10-3117, P-10-3118, P-10-3119, P-10-3120, P-10-3121, P-10-3122, P-10-3123, P-10-3124, P-10-3125, P-10-3126, P-10-3127, P-10-3128, P-10-3129, P-10-3130, P-10-3131, P-10-3132, P-10-3133, P-10-3134, P-10-3135, P-10-3136, P-10-3137, P-10-3138, P-10-3139, P-10-3140, P-10-3141, P-10-3142, P-10-3143, P-10-3144, P-10-3145, P-10-3146, P-10-3147, P-10-3148, P-10-3149, P-10-3150, P-10-3151, P-10-3152, P-10-3153, P-10-3154, P-10-3155, P-10-3156, P-10-3157, P-10-3158, P-10-3159, P-10-3160, P-10-3161, P-10-3930, P-10-4701, P-10-4702, P-10-4975, P-10-4976, P-10-4977, P-10-4978, P-10-4988, P-10-5205, P-10-5391, P-10-5392, P-10-5573, P-10-5648, P-10-5816, P-10-5829, P-10-6002, P-10-6003, P-10-6004, P-10-6005, P-10-6006, P-10-6007, P-10-6008, P-10-6009, P-10-6010, P-10-6027, P-10-6028, P-10-6029, P-10-6030, P-10-6031, P-10-6130

USGS 7.5' Quadrangles: Fresno North, Herndon

Area: 7,077 acres

Key Words: Cultural Resources Assessment, Paleontological Resources Assessment, Specific Plan

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SUMMARY OF FINDINGS

The objective of this study is to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Fresno's (City) West Area Specific Plan (Project). The purpose of the West Area Specific Plan is to implement and refine the City's vision for the West Area in order to guide future growth and development in the most northwest area of the City. The Project area is located within approximately 7,077 acres west of Highway 99 in the City of Fresno, Fresno County, California. The City is the lead agency under the California Environmental Quality Act (CEQA).

The Project surface is mapped as modern artificial fill, Holocene deposits of the San Joaquin River, the late Pleistocene Modesto Formation, and the middle Pleistocene Riverbank Formation. No fossils are known from the Fresno area. However, fossils have been found in the same formations as occur within the West Area SP. Although fossils may occur in artificial fill, any present would not be in situ and therefore not scientifically relevant. As such, artificial fill is assigned a very low Potential Fossil Yield Classification (PFYC 1). The Holocene river deposits are assigned a low potential for fossils (PFYC 2) based on age, and the Riverbank Formation is assigned a low potential for fossils (PFYC 2) based on the low number of fossils previously found in these sediments. The upper seven feet of the Modesto Formation are assigned a low potential for fossils (PFYC 2) due to the lack of fossils previously recovered. Modesto Formation sediments more than seven feet below the original ground surface are assigned a moderate but patchy potential for fossils (PFYC 3a) due the presence of numerous fossils found in other areas of the San Joaquin Valley. A mitigation measure is recommended

Cogstone requested a search of the California Historic Resources Inventory System at the Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield on July 18, 2019. Results of the record search indicate that 36 previous cultural resources studies have been completed within the boundaries of the West Area SP. The records search also determined 82 previously recorded cultural resources are located within the West Area SP. Of these, four are historic archaeological sites and 78 are historic built environment resources. The majority of the historic built environment resources are historic residences clustered around North Polk Avenue and West Acacia Avenue. Two mitigation measures are recommended

INTRODUCTION

PURPOSE OF STUDY

The objective of this study is to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the West Area Specific Plan (SP). The West Area SP consists of approximately 7,077 acres located west of Highway 99 in the City of Fresno (City) in Fresno County, California (Figure 1). The City is the lead agency under the California Environmental Quality Act (CEQA).

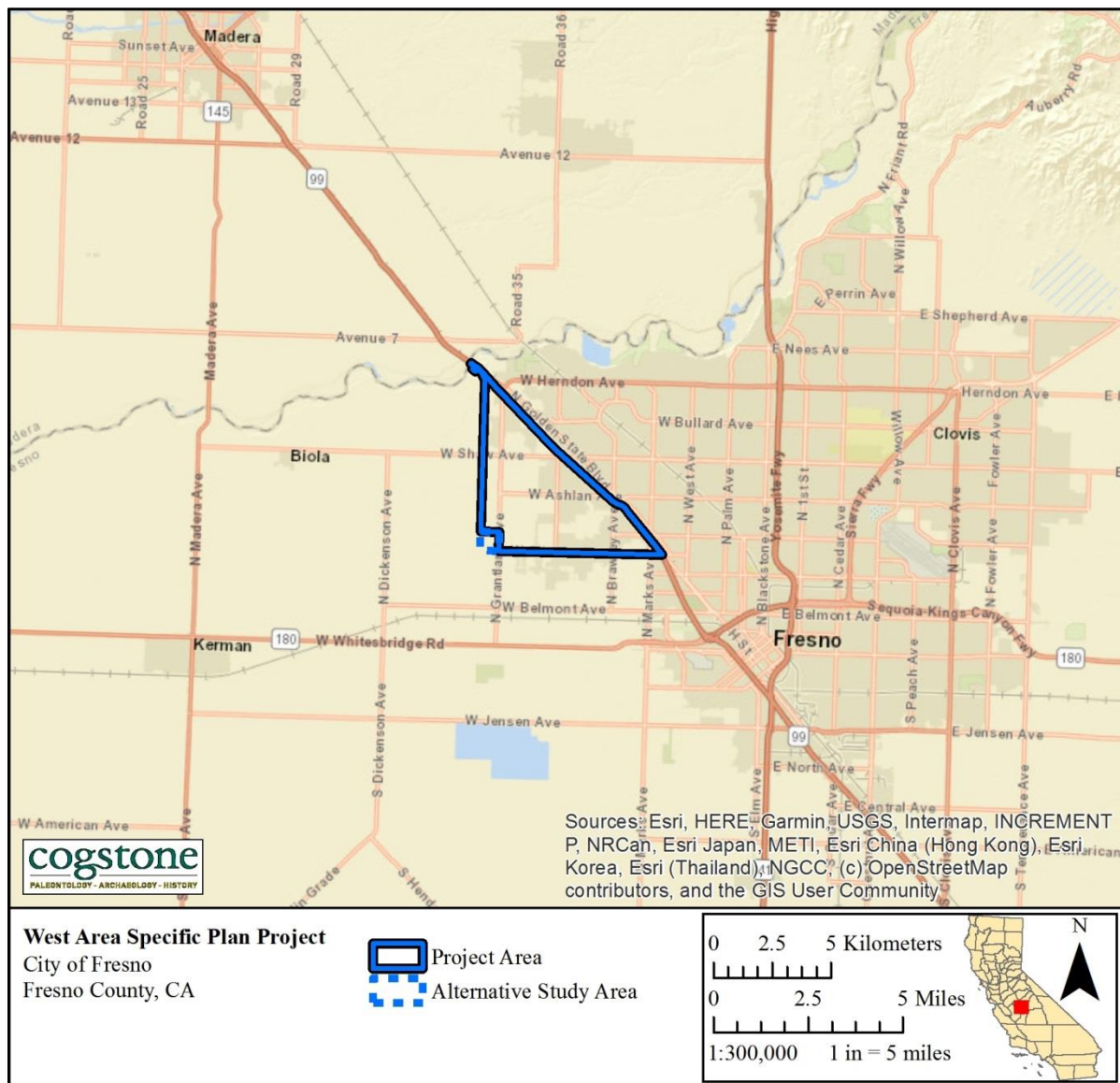


Figure 1. Project vicinity map

PROJECT LOCATION AND DESCRIPTION

The City of Fresno is located within the San Joaquin Valley in Fresno County, California (Figure 1). The Fresno West Area SP is located in the western portion of the City and is bounded by North Golden State Boulevard (Highway 99) to the north and east, North Garfield Avenue to the west, and West Clinton Avenue to the south. Specifically, the West Area SP is located within the Herndon and Fresno North United States Geological Survey (USGS) 7.5' topographic maps (Table 1; Figures 2a-3f).

Table 1. Fresno West SP Cadastral Information

USGS 7.5 TOPOGRAPHIC QUAD(S)	TOWNSHIP	RANGE	SECTION(S)
Herndon	12S	19E	31, 32
	13S	19E	4, 5, 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, 29
Fresno North	13S	19E	14, 23, 24, 25, 26
	13S	20E	30

The proposed SP will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 7,077-acre SP area. The SP will serve as a bridge between the Fresno General Plan and individual development applications in the Plan Area.

The SP seeks to provide for the orderly and consistent development that promotes and establishes the West Area as a complete neighborhood with enhanced transportation infrastructure, development of core commercial centers, creation of additional parkland, and encouraging the development of a diverse housing stock. The Plan Area does not currently have needed commercial amenities, forcing residents to travel east of State Route 99 for retail services. The Plan Area also lacks a complete roadway network and parkland.

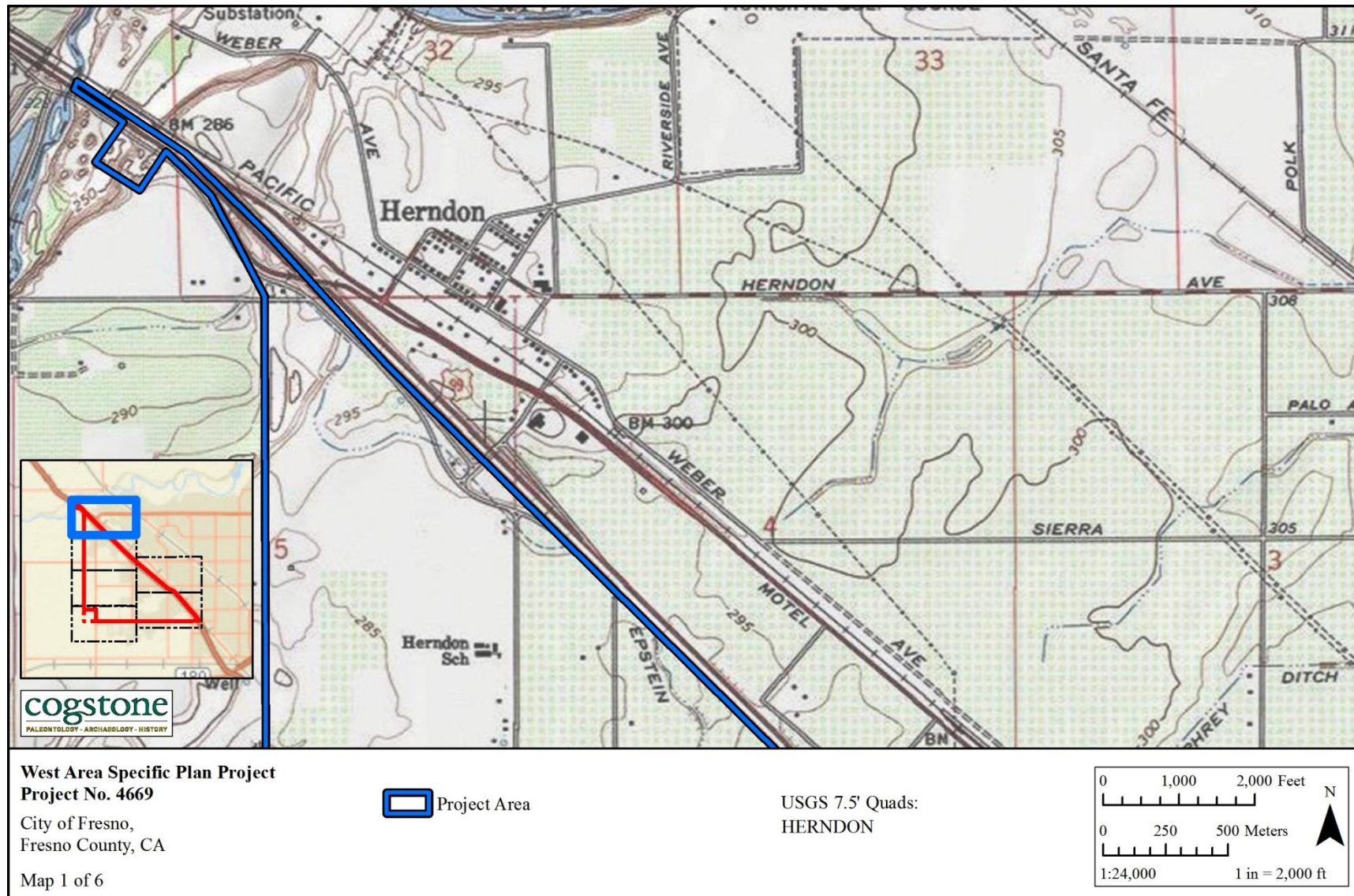


Figure 2a. Project location map

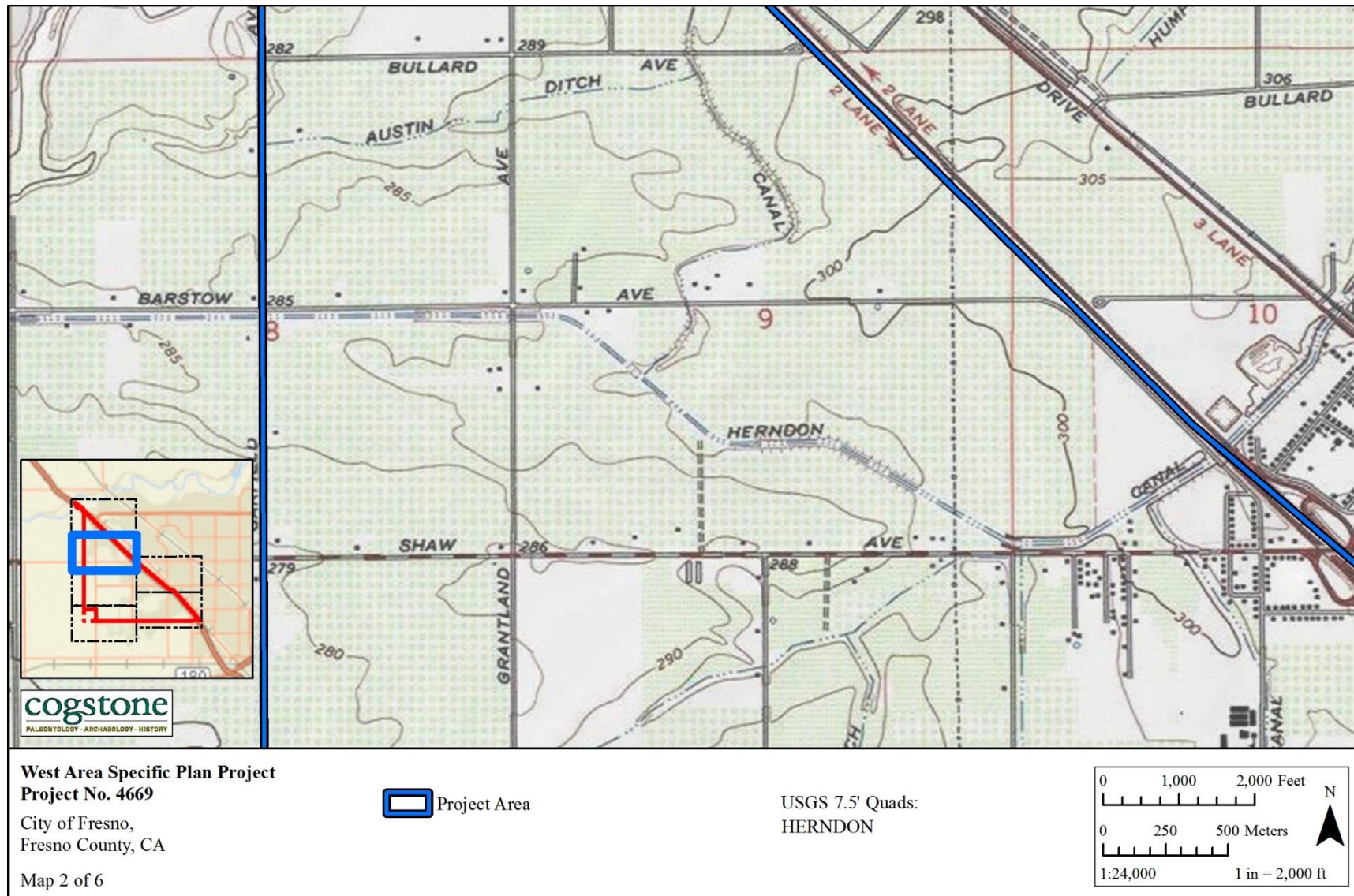


Figure 2b. Project location map

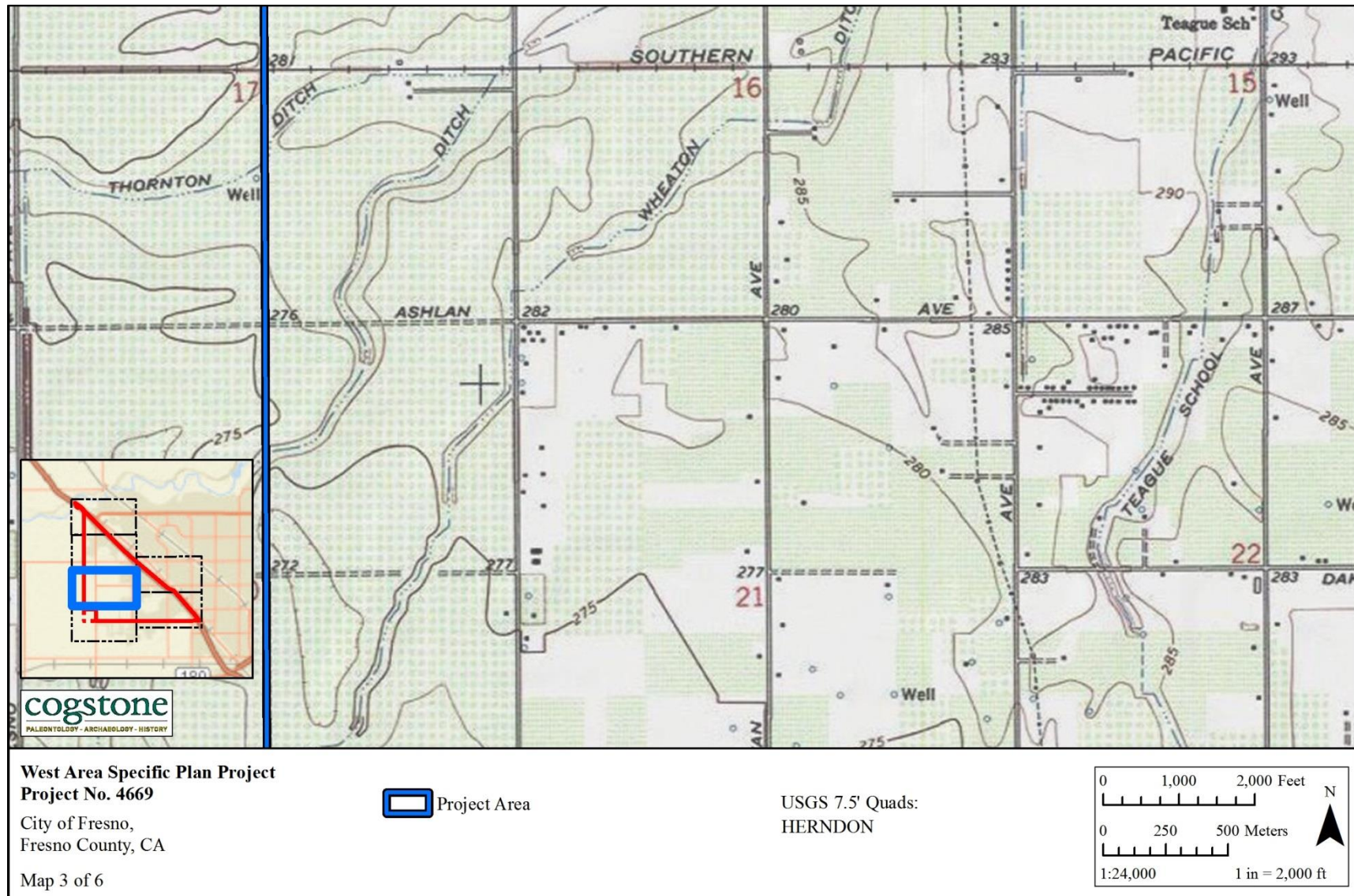


Figure 2c. Project location map

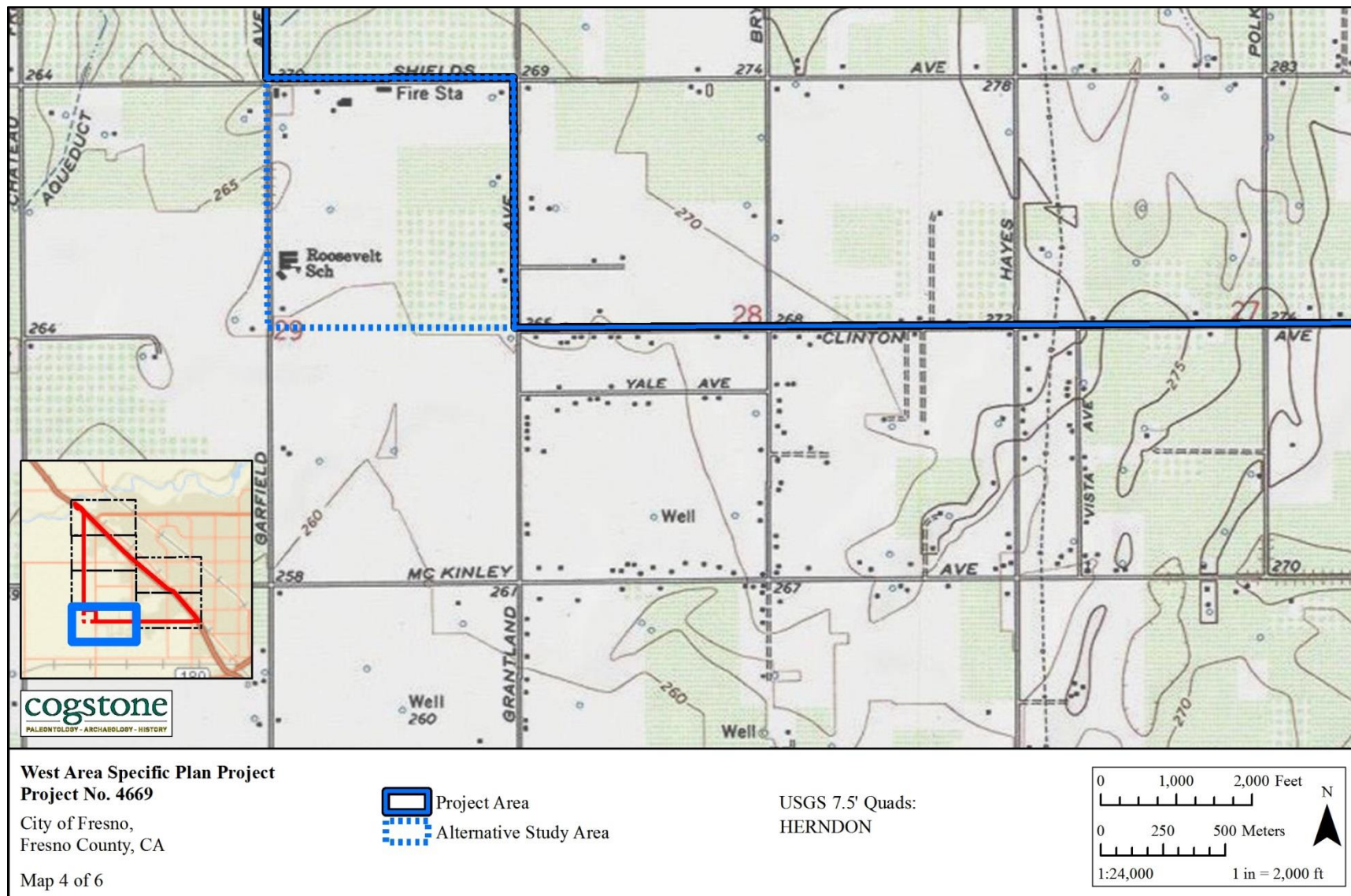


Figure 2d. Project location map

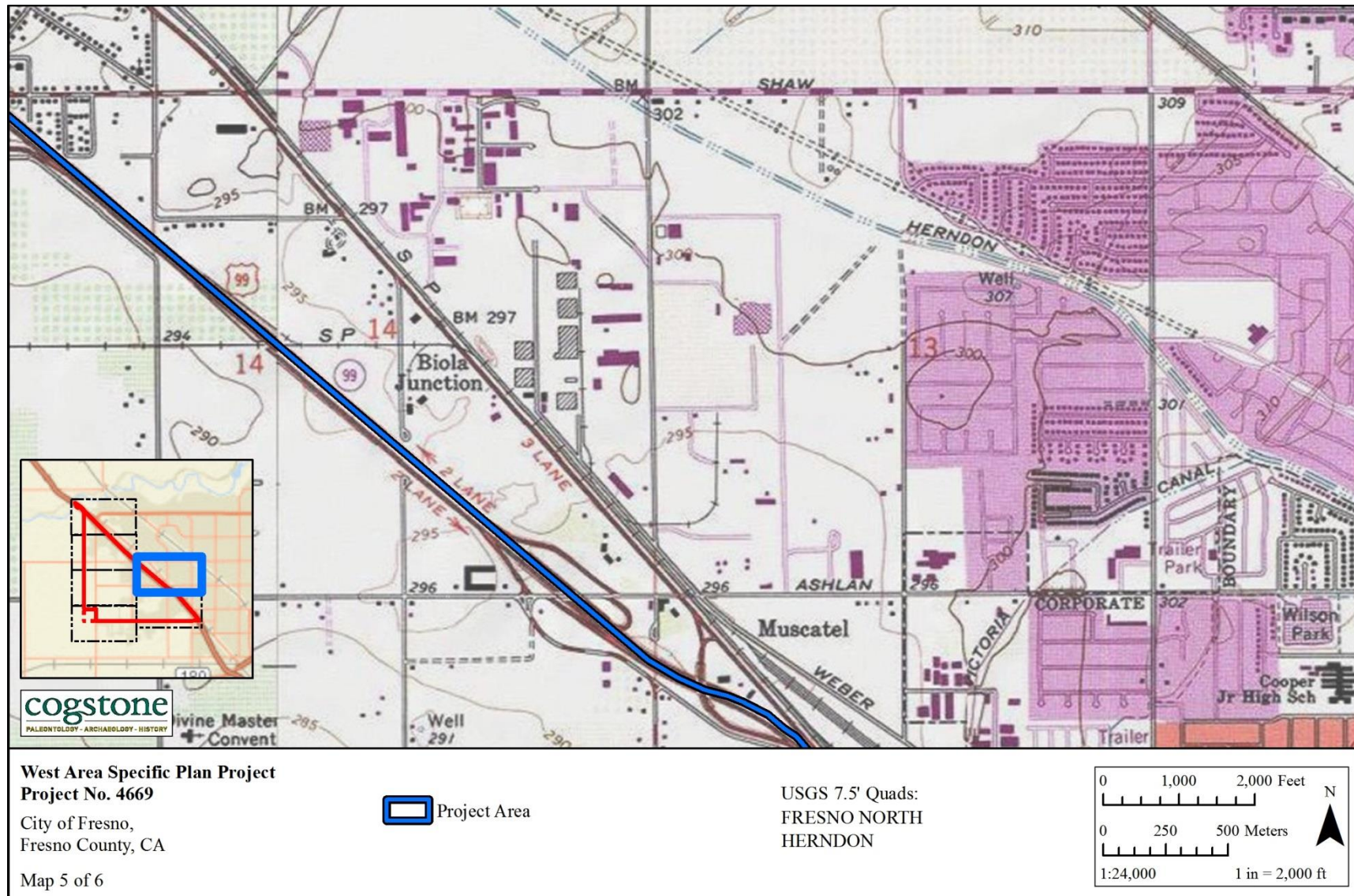


Figure 2e. Project location map

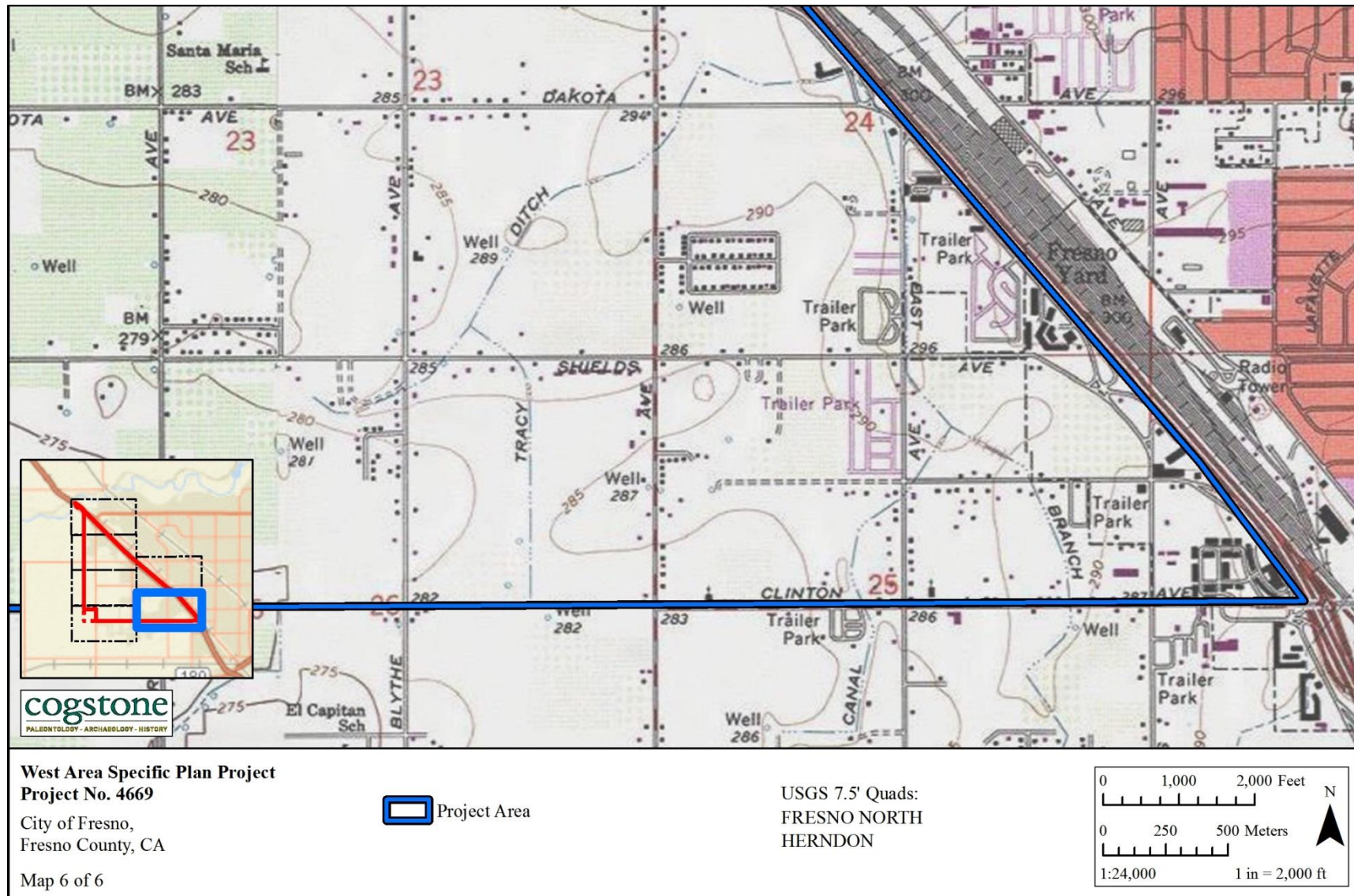


Figure 2f. Project location map

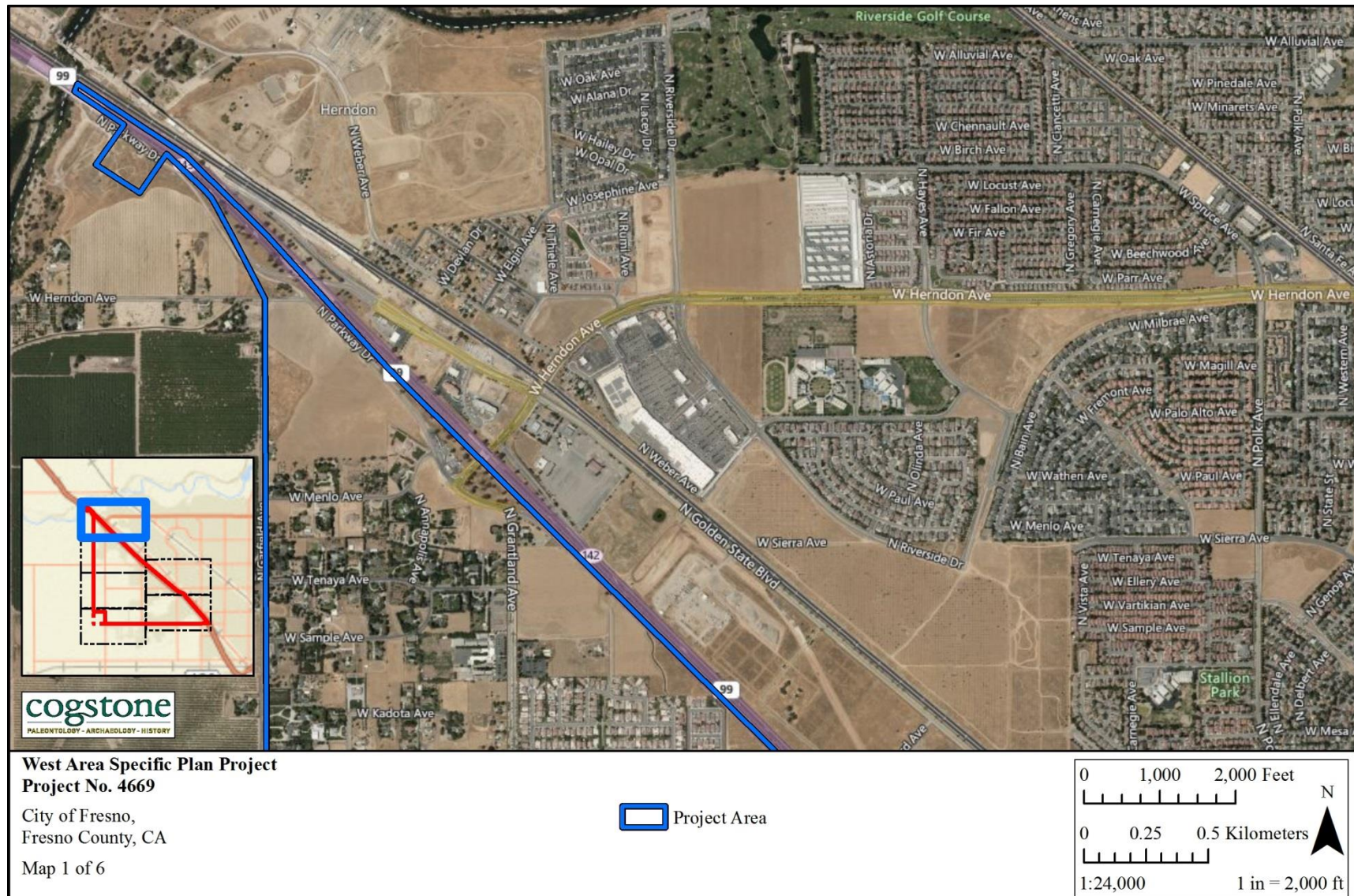


Figure 3a. Project aerial map

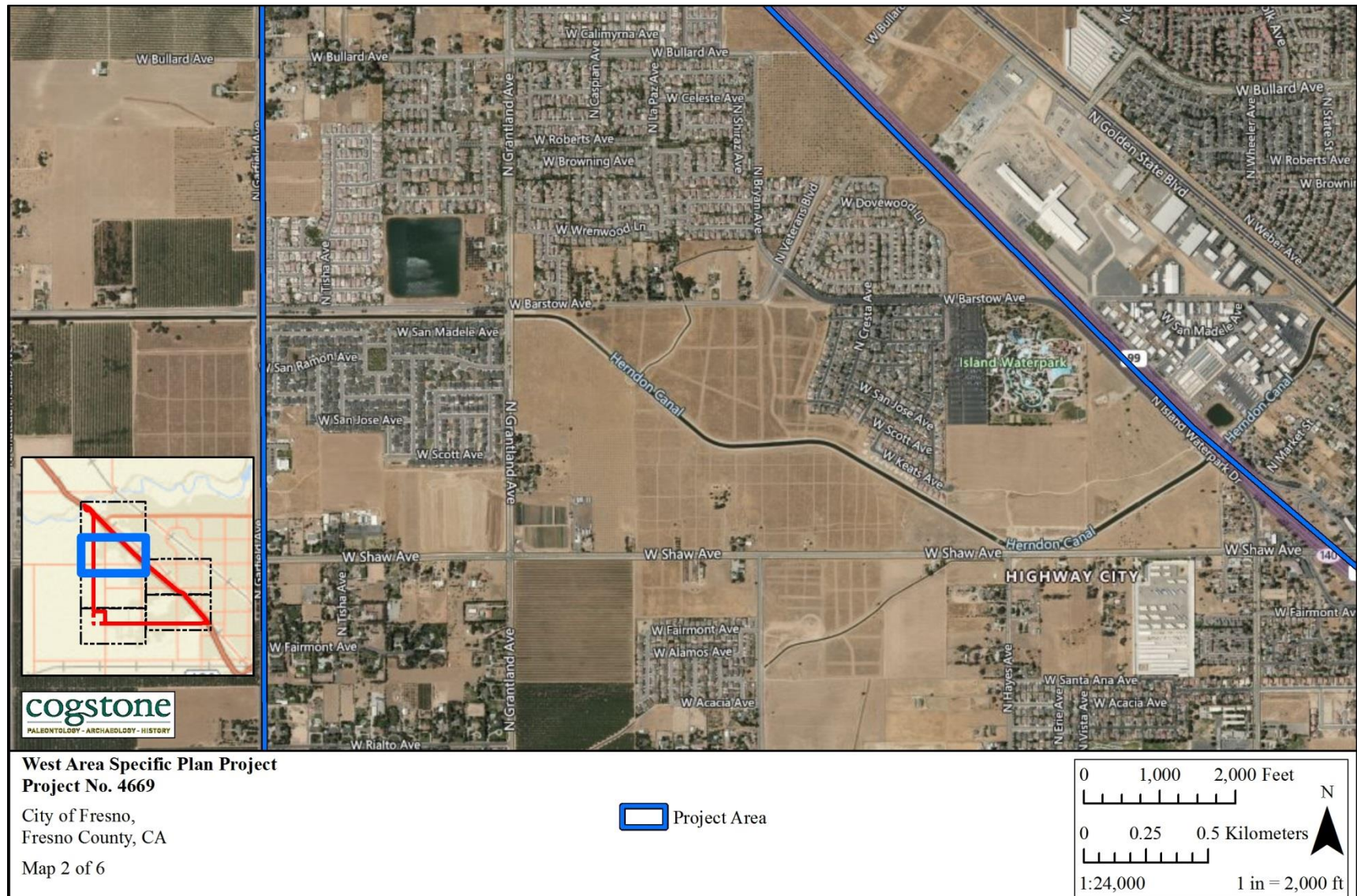


Figure 3b. Project aerial map

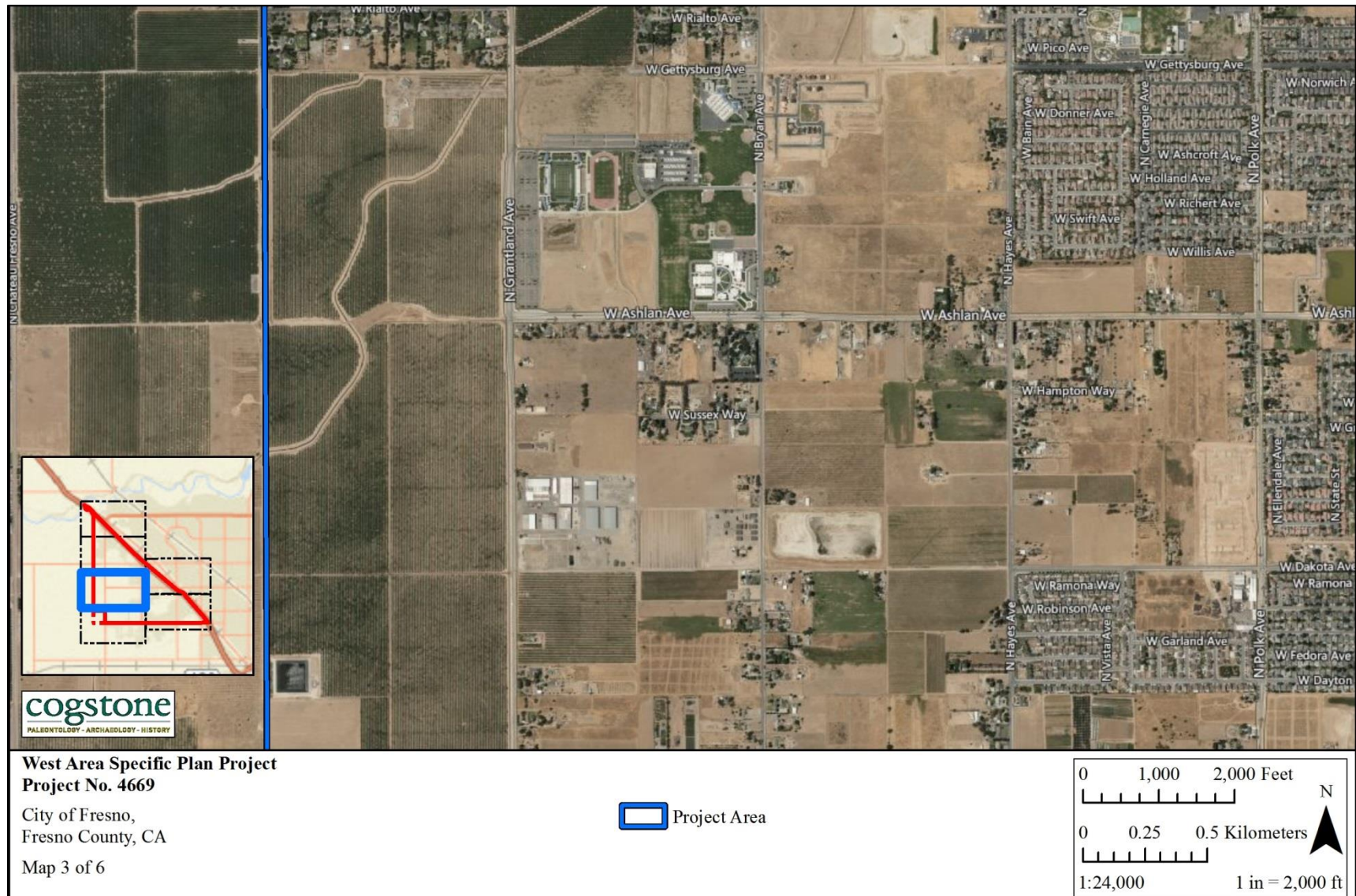


Figure 3c. Project aerial map

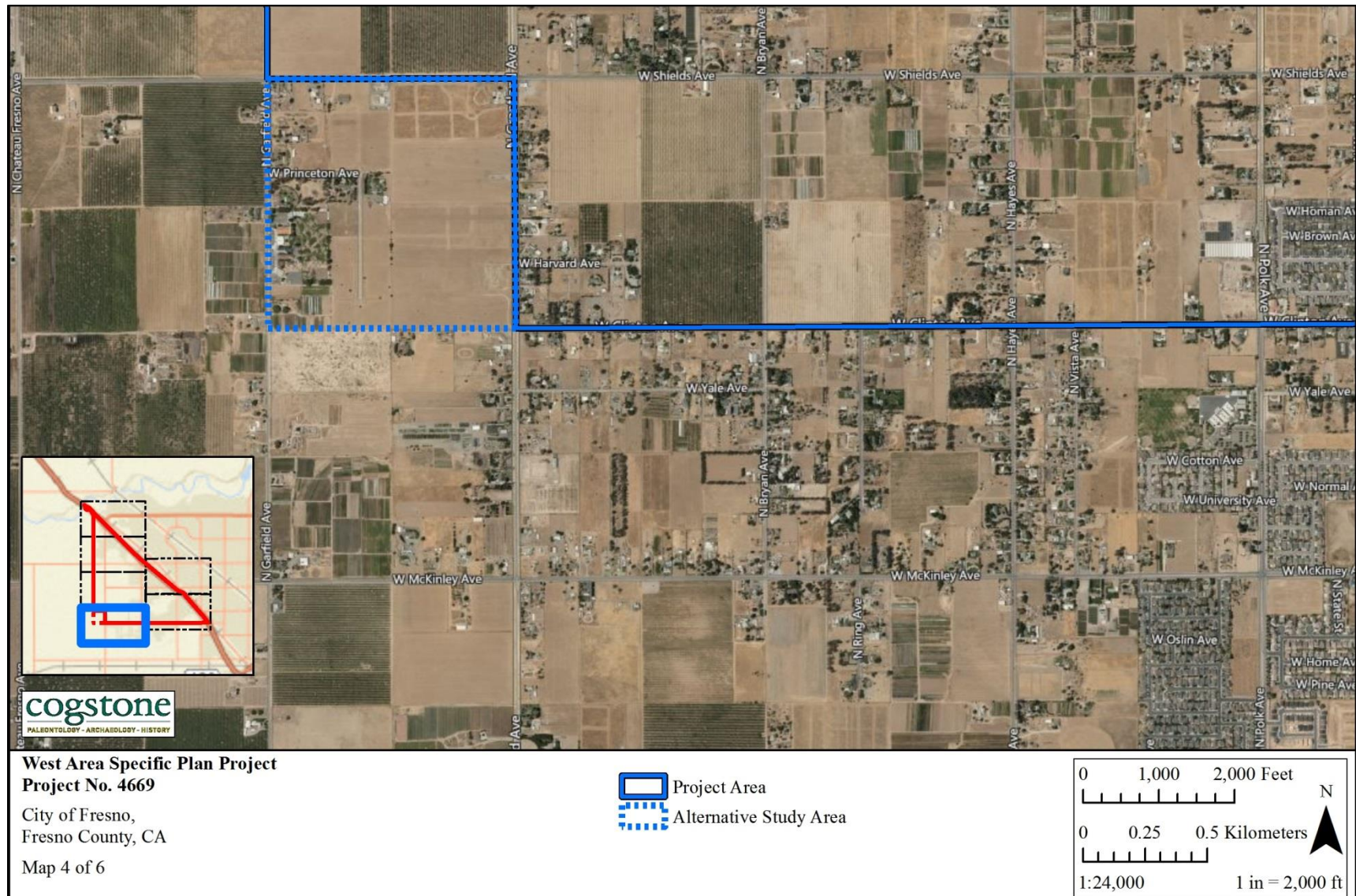


Figure 3d. Project aerial map

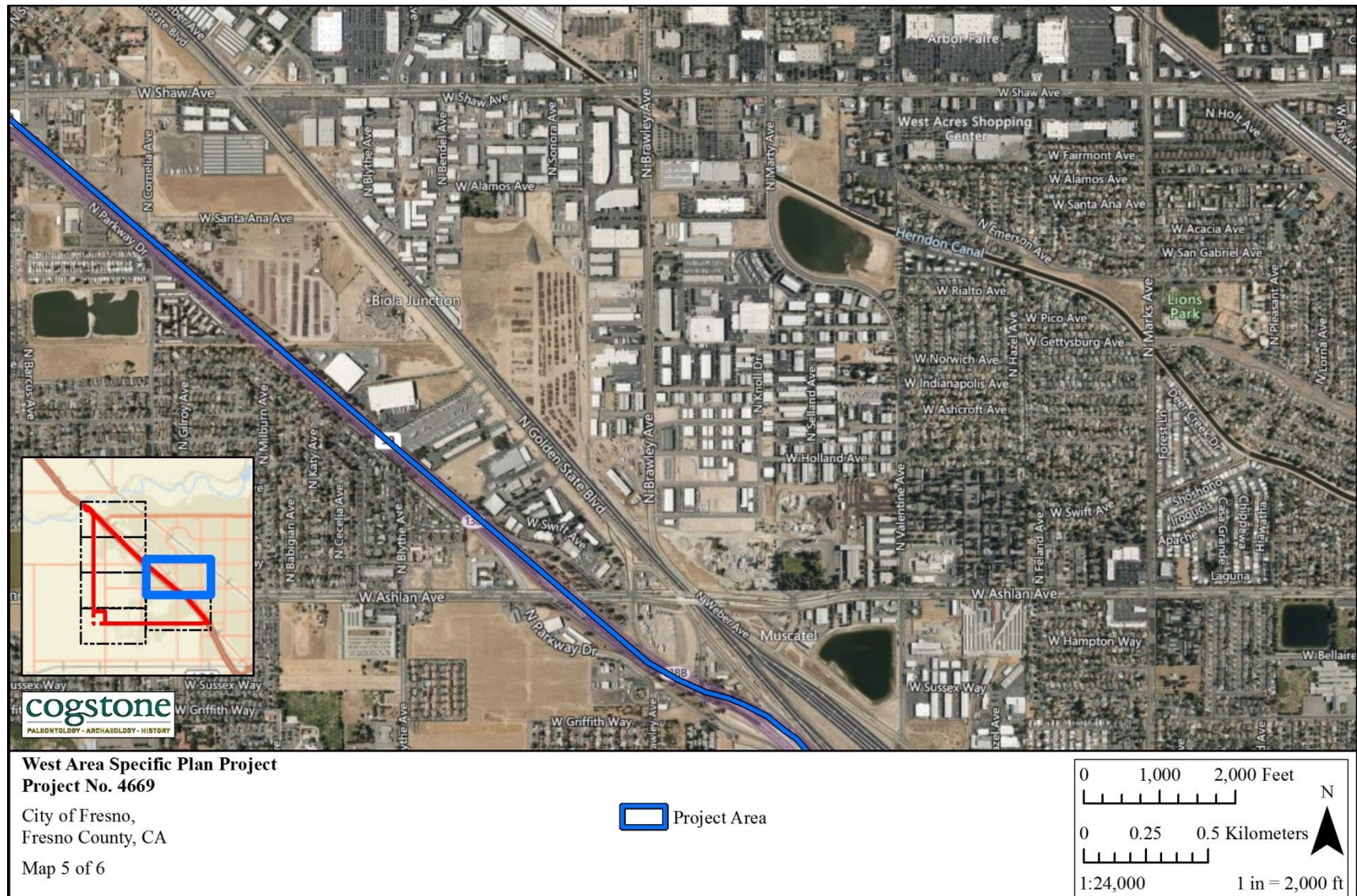


Figure 3e. Project aerial map



Figure 3f. Project aerial map

PROJECT PERSONNEL

Cogstone Resource Management Inc. (Cogstone) conducted the cultural and paleontological resources assessment study. Qualifications of Cogstone key personnel are provided (Appendix A).

- Desireé Martinez served as the Task Manager providing QA/QC while supervising all tasks for the Project. Ms. Martinez is a Registered Professional Archaeologist (RPA), has an M.A. in Anthropology from Harvard University, Cambridge and has more than 22 years of experience in southern California archaeology.
- Molly Valasik, RPA, served as the Principal Investigator for Archaeology and reviewed the report. Ms. Valasik has an M.A. in Anthropology from Kent State University and has more than 10 years of experience in southern California archaeology.
- Kim Scott served as the Principal Investigator for Paleontology, performed the survey, authored the paleontological portions of this assessment. Scott has an M.S. in Biology with an emphasis in paleontology from California State University (CSU) San Bernardino, a B.S. in Geology with an emphasis in paleontology from the University of California (UC) Los Angeles, and over 20 years of experience in California paleontology and geology.
- Holly Duke authored portions of the report. Ms. Duke has a B.A. in Archaeology/History from Simon Fraser University, British Columbia and has more than six years of experience in southern California archaeology.
- Logan Freeberg served as the Geographic Information System (GIS) technician and provided maps for this assessment. Mr. Freeberg has a B.A. from UC Santa Barbara and has more than 15 years of experience in southern California archaeology.
- Emily Barton consulted with Native American tribes for this Project. Mrs. Barton has a B.A. from CSU Sonoma in Anthropology with a minor in Paleontology and has more than 8 years of experience in southern California archaeology.
- Shannon Lopez wrote the historic context of this report. Ms. Lopez has an M.A. in History from CSU Fullerton and has more than four years of professional experience.
- Edgar Alvarez authored portions of the report. Mr. Alvarez has a B.A. in Anthropology from CSU Northridge and has more than three years of experience in southern California archaeology.
- Dr. John Harris reviewed the paleontological portions of this report for quality control. He has a Ph.D. in Geology with paleontology emphasis from the University of Bristol (U.K.), an M.A. in Geology with paleontology emphasis from the University of Texas, Austin, and a B.S. (Hons) in Geology from the University of Leicester (U.K.). Dr. Harris has over 40 years of field and research experience in North America and Africa.

REGULATORY ENVIRONMENT

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

TRIBAL CULTURAL RESOURCES

As of 2015, CEQA established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code, § 21084.2). In order to be considered a "tribal cultural resource," a resource must be either:

- (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
- (2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy,

injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks number No. 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register, is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state or national level under one or more of the following four criteria:

- 1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- 2) It is associated with the lives of persons important to local, California, or national history;
- 3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- 4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or

appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that “No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value.”

CITY OF FRESNO HISTORIC DESIGNATION

The City of Fresno’s Historic Preservation Ordinance (Ordinance) was approved by the City Council in 1979 and revised in 1999 (Fresno Municipal Code Sect. 12, Art. 16). The purpose of the Ordinance is “to preserve, promote and improve the historic resources and districts of the City of Fresno for educational, cultural, economic and general welfare of the public....” The Ordinance establishes three categories of designation for properties in Fresno – *Historic Resource*, *Heritage Property*, and *Local Historic District*. The criteria for City of Fresno historic designation correspond closely with criteria established for State and National Register eligibility, and are as follows:

HISTORIC RESOURCE DESIGNATION

The City of Fresno Historic Preservation Commission and City Council may designate any building, structure, object or site as a Historic Resource if it is found to meet the following criteria:

It has been in existence more than 50 years and it possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:

- a) It is associated with events that have made a significant contribution to the broad patterns of our history; or
- b) It is associated with the lives of persons significant in or past; or
- c) It embodies the distinctive characteristics of a type, period or method of construction,
- d) or represents the work of a master, or possesses high artistic values; or
- e) It has yielded or is likely to yield, information important in prehistory or history.

Additionally, a property may be eligible for designation as an Historic Resource if it is less than 50 years old and meets the above-listed criteria, and is found to have exceptional importance within an appropriate historical context at the local, state, or national level.

HERITAGE PROPERTY DESIGNATION

Any building, structure, object or site may also be eligible for designation as a Heritage Property by the City of Fresno Historic Preservation Commission if it is found by the Commission to be worthy of preservation because of its historical, architectural or aesthetic merit.

LOCAL HISTORIC DISTRICT DESIGNATION

In order for a group of properties to be designated as a Local Historic District (LHD) by the City of Fresno, there must be a finite group of resources related to one another in a clearly distinguishable way; or a geographically definable area that possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. Additionally, the proposed LHD must meet one or more of the following criteria:

- 1. It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, or architectural heritage; or
- 2. It is identified with a person or group that contributed significantly to the culture and development of the city; or
- 3. It embodies the distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or
- 4. craftsmanship; or
- 5. Structures within the area exemplify a particular architectural style or way of life to the city; or

6. The area is related to a designated historic resource or district in such a way that it's preservation is essential to the integrity of the designated resource or Local Historic District; or
7. The area has potential for yielding information of archaeological interest.

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003, Scott et al. 2004).

BACKGROUND

GEOLOGICAL SETTING

The Fresno West Area SP is located in the Great Valley Geomorphic Province of California. The Great Valley or Central Valley is an alluvial plain which extends a distance of about 450 miles from the Tehachapi Mountains in the south to the Klamath Mountains in the north. Located between the Sierra Nevada to the east and the Coast Ranges to the west, the valley has

an average width of about 50 miles. The southern half of the Great Valley is also known as the San Joaquin Valley, while the northern half is also known as the Sacramento Valley.

The valley floor can be divided into four geomorphic units, dissected uplands, low alluvial plains and fans, river flood plains and channels, and overflow lands and lake bottoms (Poland and Evenson 1966). Structurally, the valley is a northwest trending elongated asymmetrical trough that has been filled with a thick sequence of sediments ranging in age from Jurassic through to modern times (Hackel 1966).

Beginning during the Pliocene approximately 4 million years ago, plate tectonic related uplift brought the oldest rocks of the Sierra Nevada to the surface and began to create the mountains we know today (Figueroa and Knott 2011). The east side of the Great Valley is a nearly continuous series of coalescing alluvial fans, with their apices located where streams drain the west slope of the Sierra Nevada. These fans are composed of undeformed to only slightly deformed alluvial deposits laid down primarily during Plio-Pleistocene time by the streams from the uplands of the Sierra Nevada. These low relief alluvial fans form a continuous belt between the dissected uplands of the Sierra Nevada and the nearly flat surface of the Central Valley floor.

STRATIGRAPHY

The SP surface is mapped as Holocene deposits of the San Joaquin River less than 11,700 years old, the late Pleistocene Modesto Formation is between 121,000 and 11,700 years old, and the middle Pleistocene Riverbank Formation is between 774,000 and 121,000 years old (Mathews and Burnett 1965; Figure 4). While unmapped by Mathews and Burnett (1965), modern artificial fill is present in most locations where construction has previously occurred.

ARTIFICIAL FILL, MODERN

Modern fill is frequently not mapped on geologic maps due to its ubiquitous nature. If mapped it is only the largest deposits. Although fill is typically less than a few feet thick, it can be substantially thicker in the areas of overpasses, freeways, and other large earthworks. Any fossils that may be encountered therein are not scientifically significant.

RIVER DEPOSITS, HOLOCENE

River and stream deposits of the eastern San Joaquin Valley are dominated by Mesozoic granitic and metamorphic rocks of the Sierra Nevada. Sediments are dominated by sands to gravels with silt and clay-rich deposits. Clasts coarsen upstream with boulders up to several meters across being deposited near the mountains during flash floods. These deposits are unconsolidated and typically are typically very light grey in color.

MODESTO FORMATION, LATE PLEISTOCENE

This formation is at least 9,000 years old (Janda and Croft 1967, Croft 1972) and wood from the lower member has been dated to 42,000 years old. Most of the farmland and towns in the eastern San Joaquin Valley is on young alluvium covering the Modesto Formation.

The Modesto Formation has been divided into informal upper and lower members. However, geologic mapping within the project area is not detailed enough to include this information. The upper member is usually 10 meters or less in thickness and consists of coarse arkosic sands and gravels. The lower member is typically 25 meters thick or more and consists primarily of sands with some gravels and stratified silts from channel deposits, interdistributary and floodbasin deposits, colluvium, and eolian sand (Marchand, 1976; Marchand and Allwardt, 1981).

RIVERBANK FORMATION, MIDDLE PLEISTOCENE

The middle Pleistocene Riverbank Formation is estimated to be between 130,000 and 450,000 years old. Overall the sediments of the Riverbank Formation coarsen upwards and are derived from the interior of the Sierra Nevada (Marchand 1976, Marchand and Allwardt 1981).

Three members of the Riverbank Formation have been recognized in the Fresno area. However, geologic mapping within the project area is not detailed enough to include this information. The upper member gravel was derived from the North Merced Gravel and other older gravels during later Riverbank deposition and crops out only in the north part of the project. This unit consists of upward grading alluvial silts and sands capped by a cobble conglomerate at the top. The upper member is divided from the middle member by a moderately developed paleosol. The middle member is characterized by red colored alluvial sand, silt, and gravel with paleosols. This unit is typically 1 – 4 meters thick, thickens to the west, and represents a single aggradational unit (Marchand 1976, Marchand and Allwardt 1981).

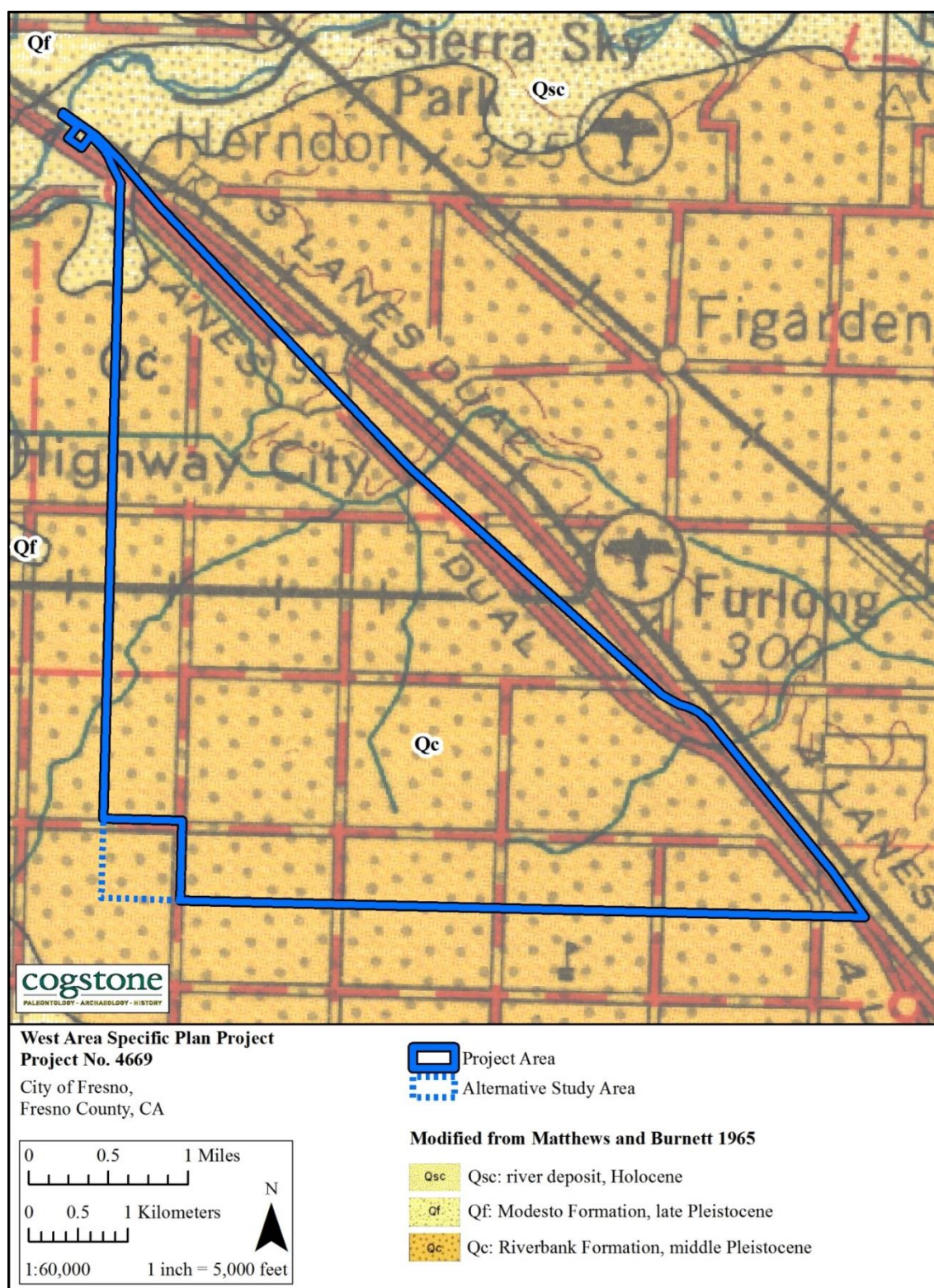


Figure 4. Geology of the Project area

PREHISTORIC SETTING

PALEOINDIAN AND LOWER ARCHAIC PERIODS (11,500–5,550 CAL B.C.)

Few archaeological sites that predate 5,000 years ago have been discovered in the region. Near the end of the Pleistocene (approximately 9,050 cal B.C.) and during the early Middle Holocene (approximately 5,550 cal B.C.), there were periods of climate change and associated alluvial deposition throughout the central California lowlands (Rosenthal et al. 2007:151). Recent geoarchaeological studies (e.g., Meyer and Rosenthal 2008; Rosenthal and Meyer 2004a, 2004b; White 2003) have verified that large segments of the Late Pleistocene landscape were removed or buried by periodic episodes of deposition or erosion during the Middle Holocene. This confirms hypotheses that Paleoindian and Lower Archaic sites were buried during the last 5,000 to 6,000 years by deposits of Holocene alluvium up to 10 meters thick along the lower stretches of the Sacramento River and San Joaquin River drainage systems. Archaeological evidence for the Paleoindian Period is scant, comprised primarily by fluted projectile points.

The Lower Archaic Period is also mainly represented by isolated finds, such as at the Tulare Lake basin in the southern San Joaquin Valley (Rosenthal et al. 2007:151-152). As a consequence of the natural alluvial deposition processes, only one site on the valley floor has produced cultural material dating to this period, and featured stone tools, remains of birds, fish and shellfish but no plant remains or milling tools. At two Lower Archaic Period sites in the foothills of Calaveras County, abundant handstones and milling slabs have been recovered.

MIDDLE ARCHAIC PERIOD (5550–550 CAL B.C.)

Middle Archaic Period archaeological sites are more common in the foothills, particularly in buried contexts between circa 4,050 and 2,050 cal B.C., and are relatively scarce on the valley floor due to burial by natural processes (Rosenthal et al. 2007:153). The change in climate and rising sea levels at the start of the Middle Holocene led to the development of the extensive marshland known as the Sacramento–San Joaquin Delta (Atwater and Belknap 1980; Goman and Wells 2000). The archaeological record indicates groups followed a seasonal foraging strategy and exploited a wide range of natural resources, including a variety of large and small mammals, fish, waterfowl, and plant resources (Fredrickson 1973; Heizer 1949; Ragir 1972; Moratto 1984). It is also likely that groups occupied higher elevations in the summer and shifted to lower elevations during the winters (Moratto 1984:206), and that residential stability along river corridors within the Central Valley increased during this period (Rosenthal et al. 2007:153). Faunal remains recovered from Middle Archaic sites include tule elk, deer, pronghorn, and rabbits, while fish remains include salmon, sturgeon, and smaller fishes. Seeds or acorns apparently formed an important part of the diet during this period (Moratto 1984:201; Rosenthal et al. 2007:153, 155), and milling implements found at sites include grinding slabs and handstones, as well as mortars and pestles.

Spears, angling hooks, composite bone hooks, and baked clay artifacts that may have been used as net or line sinkers represent the variety of fishing implements found at sites dating to this

period. Other baked clay items include pipes and discoids, as well as cooking “stones.” Impressions of twined basketry, bone tools, shell beads, and ground and polished charmstones have also been recovered. A variety of grave goods accompanied burials in cemetery areas, which were separate from habitation areas. The presence during the Middle Archaic of an established trade network is indicated by a variety of exotic cultural materials, including obsidian tools, quartz crystals, and *Olivella* shell beads.

UPPER ARCHAIC PERIOD (550 CAL B.C.–CAL A.D. 1100)

The Upper Archaic Period features more specialized technology, with innovations and new types of bone tools, *Olivella* shell beads, *Haliotis* ornaments, charmstones, and ceremonial blades. An abundance of grinding tools (mortars and pestles) and plant remains, accompanied by a decrease in slab milling stones and handstones, indicates a shift to a greater reliance on acorns as a dietary staple during the Upper Archaic Period (Fredrickson 1974:125; Moratto 1984:209; Wohlgenuth 2004; Rosenthal et al. 2007:156). A wide variety of natural resources were exploited during this period. Subsistence strategies varied regionally, focusing on seasonally available resources suited for harvesting in bulk, such as salmon, shellfish, deer, rabbits, and acorns (Rosenthal et al. 2007:156). Numerous large shell mounds dating to this period are located near fresh or salt water and indicate exploitation of aquatic resources was relatively intensive. The accumulations of cultural debris and habitation features, such as rock-lined ovens, house floors, burials, hearths, and fire-cracked rock, reflect long-term residential occupation (Bouey 1995:348-349).

In the western margins of the San Joaquin Valley, discrete cemeteries date to the Upper Archaic Period (Meyer and Rosenthal 1998; Olsen and Payen 1969; Pritchard 1970). In the southern San Joaquin Valley, villages on the shores of Buena Vista Lake were occupied year-round (Rosenthal et al. 2007:157). Trade in marine shell beads and obsidian, among other items, continued to be important.

EMERGENT/LATE PREHISTORIC PERIOD (CAL A.D. 1100–HISTORIC CONTACT)

The archaeological record in the Central Valley for the Emergent or Late Prehistoric Period documents an increase in the diversity and number of artifacts and in the number of archaeological sites (Rosenthal et al. 2007:157-159). Along with an increase in sedentism and population that led to the development of social stratification, with an elaborate ceremonial and social organization, a number of cultural innovations shaped the Emergent Period. These include the introduction of the bow and arrow and more diverse fishing equipment (bone fish hooks, harpoons, and gorge hooks). Fishing, hunting, and gathering plant foods continue as the foci of subsistence practices, including intensive harvesting of acorns and an increased emphasis on fishing (Rosenthal et al. 2007:158-159). Hopper mortars and shaped mortars and pestles, as well as bone awls used for producing coiled baskets, are common. Locally made Cosumnes Brownware has been recovered from some sites in the lower Sacramento Valley, while pottery in the Tulare basin was obtained through trade. Baked clay balls, probably used for cooking in the absence of stone, remain common.

Ceremonial and ritual items include flanged tubular pipes and baked clay effigies representing humans and animals. Clamshell disk beads were used as currency and accompanied the development of extensive exchange networks. Mortuary practices included flexed burials, the cremation of high-status individuals, and pre-interment burning of offerings in grave pits (Fredrickson 1973:127-129; Moratto 1984:211). Overall, the cultural patterns known from historic period Native American groups inhabiting the Central Valley are reflected in the subsistence and land use patterns practiced during the Emergent Period (Rosenthal et al. 2007:157-158).

ETHNOGRAPHY

The Fresno West Area SP is located within the traditional territory of the Yokuts. Historically, the Yokuts collectively inhabited the San Joaquin Valley as well as the eastern foothills of the Sierra Nevada from the Calaveras River southward to the Kern River (Kroeber 1925). Ethnographers and linguists have traditionally divided Yokuts into three geographic groups, based on linguistic similarities and differences: Northern Valley, Southern Valley, and Foothill. The SP is located in the area historically occupied by the Northern Valley Yokuts according to Kroeber (1925: 462), who suggested that they lived along the San Joaquin River. The Northern Valley Yokuts tribes' territory extended southward from the Calaveras River to the upper San Joaquin River and from the crest of the Coast (Diablo) Range east to the Sierra Nevada foothills.

Information on the Yokuts lifeways has been compiled by Kroeber (1925:474-543), Wallace (1978:462-470), and Latta (1977) and is summarized here. The Northern Valley Yokuts grouping consisted of 11 or more tribes, each containing 300 or so people (Wallace 1978:462-466). Most members lived within a single settlement that often had the same name as the political unit. These were generally established on low rises along the major watercourses. The eastern side of the San Joaquin River was more heavily populated than the land to the west of the river, due to greater water availability. A village generally contained at least three types of structures – oval single-family dwellings made of tule, ceremonial chambers, and sweathouses (Wallace 1978:465). According to Kroeber's informants, a tribe of Yokuts known as the *Heuchi* lived close to the SP, near Fresno River (1925: 470).

The fundamental economy of the Yokuts was subsistence fishing, hunting, and collecting plant foods. Acorns, collected in the fall and then stored in granaries, were a staple food (Wallace 1978:464). During the fall and spring runs, salmon was a dietary mainstay. Wildfowl, such as geese and ducks, were also an important staple. Additional dietary plant parts included seeds, berries and tule roots. Large game included deer, elk, antelope, and black bears.

A wide variety of tools, implements, and enclosures were used by the Northern Valley Yokuts to gather, collect, and process food resources (Kroeber 1925:527; Latta 1977; Wallace 1978:464-465). These included bow and arrows, nets, traps, slings, and blinds for hunting land mammals and birds; and harpoons, hooks, and nets, as well as tule rafts. Sharpened digging sticks and woven tools (seed beaters, burden baskets, and carrying nets) would have been used to collect plant resources and a variety of implements (stone mortars and pestles, bedrock and portable mortars, stone knives, and bone tools) used for processing resources. The Northern Valley Yokuts traded with neighboring groups for bows and arrows, baskets, shell ornaments and beads, obsidian, and mussels and abalone (Wallace 1978:465).

The San Joaquin Valley was never settled during the Spanish and Mexican periods, but influences from the coastal missions and presidios were felt inland by the late 1700s. By 1805, Northern Valley Yokuts were transported to the San José, Santa Clara, Soledad, San Juan Bautista, and San Antonio missions that were established during the Spanish era (Wallace 1978:468-469). Later, disease and military raids claimed many lives during the Mexican period, followed by displacement during the early American Period by gold seekers and farmers.

Pre-contact population density for Northern Valley Yokuts has been estimated at 25,000 to 31,000 (Wallace 1978:463). In 1852, representatives of only three Northern Valley Yokuts tribes (including the *Heuchi*) remained to sign one of a series of statewide treaties (Wallace 1978:469). Today, Yokut communities are found on the Tule River Reservation in Tulare County and on three rancherias: Picayune in Madera County at Coarsegold, Santa Rosa in Kings County, and Table Mountain in Fresno County near Friant. Some Foothill Yokuts also live with Central Sierran Miwok on the Tuolumne Rancheria in Tuolumne County.

HISTORIC SETTING

SPANISH EXPLORATION

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino (Bean and Rawls 1993). The Spanish colonization of what was then known as Alta California began with the 1769 overland expedition, led by Gaspar de Portolá, with a crew of 63 men, in order to explore the land between San Diego and Monterey. Between 1769 and 1822, the Spanish had colonized California and established missions, presidios, and pueblos and documented the people and landscape along the way (McCawley 1996).

Following the Portolá Expedition, vast tracts of land were granted to the missions. The goals of the missions were tri-fold: they establish a Spanish presence on the west coast, proselytize Christianity to the native peoples, and served to exploit the native population as laborers. The Spanish also hoped each mission would become a town center, whereas, “the pueblo would

receive a ground of four square leagues of land... and other property would be parceled out among the Indians". The missionaries, or padres, would essentially serve as a mayor, or head of the town (Bean 1968).

MEXICAN PERIOD

In 1821, Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, appropriating the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands, in the form of land grants, to private owners (Bean and Rawls 1993). The lands were typically granted to soldiers who proved their loyalty to the Mexican government once liberated from the Spanish crown.

CITY OF FRESNO

The County of Fresno was founded in 1856 from portions of Tulare, Merced, and Mariposa Counties. In 1872, Central Pacific Railroad, predecessor to the Southern Pacific Railroad Company, arrived in the San Joaquin Valley. The local train station, "Fresno Station," represented the epicenter of Fresno (Planning Resource Associates, Inc. 2008).

Fresno's original site plan was organized on a grid system which extended eastward from the Central Pacific Railroad tracks along what is currently H Street. In 1872, the Railroad began selling lots to entrepreneurs and by the end of the year Fresno consisted of a few residential homes, multiple livery stables, four restaurants and hotels, and two stores (Planning Resource Associates, Inc. 2008).

In 1874, the Fresno county seat was transferred from Millerton, which had experienced years of floods and a catastrophic fire, to the City of Fresno (Hoover & Kyle 2002). Fresno's new position as the county seat resulted in a boost of prosperity and by 1885 Fresno was incorporated with a population of approximately 2,000 (Victor Gruen Associates 1968).

Fresno's economic success came from its agricultural production in conjunction with the railroad. Fresno County became the number one agricultural producer in California in addition to one of the nation's best producers of cotton, figs, grapes, and raisins (Hoover & Kyle 2002). In 1911, the Sun-Maid Raisin Cooperative was founded in the City of Fresno as the principle-packing center and hosted multiple packinghouses throughout the City (Hattersley-Drayton 2013). To this day, Fresno County is ranked as one of the nation's highest agricultural producer, with commodities valued at over \$8 billion in 2022.

By the late 1890s and early 1900s, Fresno's population and economy continued to grow with the U.S. Census showing the City's population doubling from 12,470 in 1900 to 24,892 in 1910 (U.S. Census 1910). The Fresno City Board of Trustees approved the establishment of the City's first planning commission in 1916, in anticipation of further growth. By 1923 the plans were

adopted and included parks and recreation centers, streets to accommodate the increased population (Planning Resource Associates, Inc. 2008).

Fresno's early 20th century residential development located north of the downtown area caused the expansion of the electric Fresno Street Railway established in 1888. The Railway was later taken over by the Fresno City Railway Company in 1901 and built northward to connect the suburban areas to the City's center. The electric streetcar would remain the primary form of mass transit in Fresno City until its replacement by the bus by 1939 (Planning Resource Associates, Inc. 2008).

During the Post-War Economic Boom (1945-1973), the population shifted from Fresno's center to the newly developed suburbs as a result of increased population and increase in personal car ownership. This shift in population caused the decline of the City's urban center and in the 1960s, Fresno began an urban revitalization project for downtown resulting in the construction of the Fulton Mall in 1964. This six-block pedestrian mall was considered an innovative model and effective response to what was considered at the time to be America's "Urban Crisis" (Victor Gruen Associates 1968).

During the 1970s to 1990s, development continued to expand outwards from Fresno's City center.

PROJECT AREA HISTORY

The Fresno West SP boundaries are defined by Clinton Avenue at its southern boundary, North Grantland Avenue at its western boundary, and the SR-99 running northwest/southeast connecting the northern end of Grantland Avenue to the eastern end of Clinton Avenue. Historic topographic maps, from 1923 (Bullard 7.5x15 minute) to approximately 1965 (Fresno North 7.5 minute) show the vast majority of the SP occupied by farmland and various farmhouses. The Post-War Economic Boom (1945-1973) is depicted in historic aerials from 1962 and 1972 as an increase in tract homes on previous agricultural land as the population shifted from urban to suburban locations. The tract homes spread west of SR-99 through the SP. By 1998, nearly a third of the Fresno West Area SP is developed and closely resembles the area's built environment at it exists today.

RECORD SEARCHES AND LITERATURE REVIEW

PALEONTOLOGY

A search for paleontological records was completed by the Natural History Museum of Los Angeles County (LACM; McLeod 2019; Appendix B). Published literature, unpublished

paleontological reports, and fossil databases were also searched for fossil records (Jefferson 1991a, 1991b; Hilton et al. 2000; Finger 2017; UCMP 2019; PBDB 2019).

No fossils are known from the Fresno area. However, fossils have been found in the same formations as occur within the Fresno West Area SP.

ARTIFICIAL FILL

Although fossils may occur in artificial fill, any present would not be *in situ* and therefore not scientifically relevant.

RIVER DEPOSITS

Being less than 11,700 years old, these sediments are too young to contain the remains of extinct animals.

MODESTO FORMATION LOCALITIES

In Fresno County, the Modesto Formation has produced fossils of mammoth (¹†*Mammuthus* sp.) and a camel (†*Camelidae*) from two localities (UCMP V99829, UCMP V99830; UCMP 2019).

The number of fossils recovered from the Modesto Formation in Merced County has increased greatly in the past few years. Along State Route 99 (SR-99) 1,667 late Pleistocene fossils were found between 7 and 26 feet below the original ground surface in excavations associated with the construction of the new Le Grand Road overpass:

Except for one locality found in a paleosol, all fossils were recovered from sandy stream and adjacent slow moving water and flooding (overbank) environments. Most fossils were not recovered from the streams themselves but instead were from the adjacent sediments. The presence of abundant root traces and caliche (calcium carbonate) provides evidence of plants and occasional drying events.

Large mammals identified include Columbian mammoth (†*Mammuthus columbi*), giant ground sloth (†*Paramylodon harlani*), yesterday's camel (†*Camelops hesternus*), llama (†*Hemiauchenia* sp.), ancient bison (†*Bison antiquus*), horses of at least two types (†*Equus occidentalis* and †*E. conversidens*), and deer (*Odocoileus hemionius*). In addition, partial specimens were assigned to †Proboscidea (fossil elephant, probably mammoth), and undifferentiated hooved mammal (Ungulata). Carnivores identified include dire wolf (†*Canis dirus*), coyote (*Canis latrans*) and cougar (*Felis concolor*).

Small mammals identified include jackrabbit (*Lepus californicus*), Audubon's and

¹ † - Indicates that the species, or for higher taxonomy, the species that could be present is extinct.

Bachman's rabbits (*Sylvilagus auduboni* and *S. bachmani*), rabbits of indeterminate species (*Sylvilagus* sp.), ground squirrel (*Spermophilus* sp.), kangaroo rat (*Dipodomys* sp.), pack rat (*Neotoma* sp.), and pocket gopher (*Thomomys bottae*). Mice include the meadow mouse or vole (*Microtus* sp.), pocket mouse (*Perognathus* sp.), deer mouse (*Peromyscus* sp.), and harvest mouse (*Reithrodontomys* sp.).

Birds identified include Canada goose (*Branta canadensis*), California quail (*Calipepla californica*), western scrub jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), American robin (*Turdus migratorius*), western meadowlark (*Sturnella neglecta*) and sparrow (*Zonotrichia* sp.). Fishes were restricted to minnows (Cyprinidae) and three-spine stickleback (*Gasterosteus aculeatus*).

Western pond turtle (*Actinemys marmorata*) appears to be the only type of turtle present. Other reptiles were only identified to group. These are snakes of the gopher snake family (Colubridae) and rattlesnake (*Crotalus* sp.). Similarly, specimens of frog and toad are present but could not be identified more specifically.

The presence of bison and dire wolf together indicates the fossil fauna is within the Rancholabrean Land Mammal Age. The overall assemblage indicates a grassland environment with creeks and streams. [Gust, Scott, and Richards 2012]

A fossil of elephant (†Proboscidea) is known from the Modesto Formation in Ash Slough just northeast of Chowchilla (LACM 7254), Madera County (McLeod 2019).

Based on the number of fossils recovered from the Modesto Formation along SR-99 at Le Grand Road in Merced County, fossils recovered during excavations for the new Sandy Mush Road overpass are most likely from the Modesto Formation as well. Numerous Pleistocene fossils including the palate and tusk of a subadult mammoth were found during construction (Stewart personal communication 2015).

Locally, a records search for the City of Clovis in Fresno County from the University of California Museum of Paleontology (UCMP) reported no fossil localities within the city limits in either the Modesto and/or Riverbank formation (Finger 2017). While the City of Clovis General Plan update (City of Clovis 2014) stated that fossils have been recovered within the City previously, further investigations found that the source of this statement was a technical study prepared by the San Bernardino County Museum for the 1993 General Plan update. This study references the fact that fossils have been found in the Great Valley in the Riverbank and Turlock Lake Formations and from Pleistocene river terraces. The study inaccurately attributes large mammal fossils as having been recovered within the City of Clovis from river terraces and no fossils are currently known within the City of Clovis.

RIVERBANK FORMATION LOCALITIES

In Fresno, County the Riverbank Formation has produced fossils of horse (†*Equus* sp.; UCMP 2019). Fossils previously attributed to the Riverbank formation at Fairmead Landfill in Madera County have been reassigned to the middle to early Pleistocene Turlock Lake Formation (Dundas et al. 1996) which does not appear in the current study area. In Sacramento County, the Riverbank Formation has produced fossils of Harlan’s ground sloth (†*Paramylodon harlani*), dire wolf (†*Canis dirus*), coyote (*Canis latrans*), Columbian mammoth (†*Mammuthus columbi*), horse (†*Equus* sp.), yesterday’s camel (†*Camelops hesternus*), ancient bison (†*Bison antiquus*), antelope (Antilocapridae), deer (Cervidae), rabbit (Leporidae), pocket gopher (*Thomomys* sp.), woodrat (*Neotoma* sp.), squirrel (*Sciurus* sp.), broad-footed mole (*Scapanus latimanus*), gartersnake (*Thamnophis* sp.), and Sacramento blackfish (*Orthodon* sp.; Hilton et al. 2000).

CULTURAL

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

The purpose of the cultural records search is to identify all previously recorded cultural resources (prehistoric and historic archaeological sites, historic buildings, structures, objects, or districts) within the Fresno West Area SP. All cultural resources, as well as cultural resource surveys, performed within the Fresno West Area SP boundaries were reviewed.

Cogstone archaeologist, Holly Duke, requested a search of the California Historic Resources Information System (CHRIS) from the Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield on July 30, 2019, which included the entire SP. Results of the record search indicate that 36 previous studies have been completed within the SP (Table 2).

Table 2. Previous Studies within the Fresno West Area SP

REPORT NO. (FR-)	AUTHOR(S)	TITLE	YEAR
00069	Hudlow, Scott M. and de la Garza, Theresa	A Phase I Architectural Survey for the Highway City Specific Plan Area City of Fresno, California	1996
00135	Hatoff, Brian, Voss, Barb, Waechter, Sharon, Benté, Vance, and Wee, Stephen	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project.	1995
00166	Kus, James S.	Negative Archaeological Survey Report for Proposed Fresno Housing Authority Clinton Avenue Project	1994
00191	Wren, Donald G.	An Archaeological Survey: Central Unified School District Stadium Project	1998
00271	Bissonnette, Linda Dick	Cultural Resources Survey for Central unified School District Adult School, Fresno County, California	1991

REPORT NO. (FR-)	AUTHOR(S)	TITLE	YEAR
00287	Bissonnette, Linda Dick	Phase I Cultural Resources Assessment: Central Unified School District, Milburn/Dakota Elementary School Site, Fresno County, California	1992
00294	Bissonnette, Linda Dick	Cultural Resources Assessment for the Central Unified School District, New High School Project, Northwest of Dakota and Cornelia Avenues, Fresno County	1993
00302	Bissonnette, Linda Dick	Grantland Avenue Sewer Trunk and Herndon Expressway Cultural Resources Assessment	1994
00393	Dondero, Steven	Negative Archaeological Survey Report for the Herndon Avenue Overcrossing, Fresno County	1988
00433	Davis, Alan, Dick, Linda, and Varner, Dudley	An Archaeological Reconnaissance of the Gates Substation to the Proposed Gregg Substation 500 KV Transmission Line, Fresno and Madera Counties	1977
00447	Jackson, Scott R.	Environmental Impact Evaluation: An Archaeological Assessment of God's Family Church Property, Fresno County, California	1990
00677	Roop, William	A Cultural Resources Evaluation of Tracts 4488 (APN 311-031-24) and 4581 (APN 404-071-17), Fresno, Fresno County, California	1993
00760	Varner, Dudley M.	Highway City Sewer Project (Improvement Dist. #166)	1974
01640	Binning, Jeanne Day	Negative Archaeological Survey Report Installation of Traffic Surveillance Stations along Interstate 5, State Route 41, and State Route 99 in Madera and Fresno Counties	1999
01656	Wren, Donald G.	A Cultural Resource Study: Stormwater Retention Basin EN and EO, Fresno County, California	2000
01702	Wren, Donald G.	A Cultural Resource Study: Basin CD Project, Fresno County, California	2001
01710	Szeto, Andy	Site Location Map and Site Description for PL-754-01	1998
01808	Wren, Donald G.	An Archaeological Survey Central Unified Education Center, Fresno County, California	2002
01811	Hildebrand, Karen and Roper, C. Kristina	Hardpan and Adobe Brick: A National Register Evaluation of Two Highway City Adobe Buildings, Fresno, California	1997
01942	Hudlow, Scott M. and de la Garza, Theresa	A Phase I Architectural Survey for the Highway City Specific Plan Area, City of Fresno, California	1996
01953	Wren, Donald G.	Draft Environmental Impact Report: Central Unified Education Center: State Clearinghouse No. 2002021064	2002
02029	Brady, Jon L.	Historic Property Survey for the Proposed La Estancia Housing Project, Fresno, California	2004
02212	Nettles, Wendy M.	Phase I Cultural Resources Study of Assessor's Parcel No. 311-140-14, 5901 W. Shaw Avenue, Fresno, California	2006
02227	Losee, Carolyn	New Tower Submission Packet, FCC Form 620	2006
02256	Hobbs, Kelly	Historic Property Survey Report: State Route 99/Shaw Avenue Interchange Improvement Project, Fresno, California	2002
02256	Brady, Jon	Underground Caverns 4951 N. Dale, Fresno California, Historic Evaluation and Determination of Significance	2000
02256	Kiaha, Krista	Archaeological Survey Report for the Shaw Avenue Interchange Reconstruction at State Route 99 Fresno County, California	2001
02256	Hobbs, Kelly	Historic Architecture Survey Report/Historic Resource Evaluation for State Route 99/Shaw Avenue Interchange Improvements	2002

REPORT NO. (FR-)	AUTHOR(S)	TITLE	YEAR
02256	Unknown	Public Information Meeting Summary Report State Route 99/Shaw Avenue Interchange Reconstruction Project	2001
02336	Brady, Jon L.	Historic Property Survey for the Horizon Enterprises Property 6785 & 6825 West Barstow Avenue in the City of Fresno, California	2008
02348	Roper, C. Kristina	A Cultural Resources Survey of the Bella Serra Residential / Commercial Development, Herndon, Fresno County, California	2007
02405	Lanner, David	Archaeological Survey Report Herndon Interchange Improvements Project, Fresno County	2010
02408	Lanner, David	Archaeological Survey Report for the Island Park and North Fresno Six Lane Expansion in Fresno County and Madera County	2008
02408	Deocampo, Daniel	First Supplemental Extended Phase I Report Geoarchaeological Investigations for the Island Park Six-Lane Project, Fresno and Madera Counties, California	2008
02408	Deocampo, Daniel	Final Extended Phase I Report Geoarchaeological Investigations for the Island Park Six-Lane Project, Fresno and Madera Counties, California	2007
02408	Vallejo, Philip	Historical Resource Evaluation Report Island Park Six-Lane Project, Fresno and Madera Counties, California	2008
02408	Lanner, David	Historic Property Survey Report Proposed Highway 99 Six-Lane Expansion, Fresno County and Madera County, California	2008
02431	Hibma, Michael	Historical Resources Evaluation Report for the Veterans Boulevard/State Route 99 Interchange and Grade Separations Project, Fresno, Fresno County, California	2010
02454	Whitehouse, John and Blind, Heather	Historic Property Survey Report for the Veterans Boulevard/State Route 99 Interchange and Grade Separations Project, Fresno, Fresno County, California, Caltrans District 6, EA#06-OH3600	2010
02711	Stoyka, Michael	Survey for Island Park ASR and HPSR for the Bridge Replacement at Highway 99 and the San Joaquin River, Fresno County, California	2013
02721	Brady, Jon L. and Brady, Justin M.	Archaeological Survey Report for the Proposed New Community Health Center, 4711 West Ashlan Avenue, Fresno, Fresno County, California	2015
02722	Anderson, Katherine and Vader, Michael	Fresno Recycled Water Distribution System Project, Phase I Cultural Resources Study, Fresno County, California	2015
02728	Anderson, Katherine and Vader, Michael	Recycled Water Distribution System, Southwest Quadrant: Phase I Cultural Resources Study	2017
02775	Losee, Carolyn	Cultural Resources Investigation for AT&T Mobility CVL02290 "Polk" 5957 West Shields Avenue, Fresno City and County, California	2016

The results of the records search indicates a total of 82 cultural resources have been previously recorded within the SP (Table 3). Of these cultural resources, four are historic archaeological sites and 78 are historic built environment resources.

Table 3. Previously Recorded Cultural Resources within the Fresno West Area SP

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
003110	-	Historic Resource	Single-family residence constructed in 1935 located at Parkway Drive (Building 14).	1996	Unevaluated
003111	-	Historic Resource	Single-family residence constructed in 1940 located at 5055 Parkway Drive.	1996	Unevaluated
003112	-	Historic Resource	Parkway Mini Mart constructed in 1920 located at 5510 Parkway Drive.	1996	Unevaluated
003113	-	Historic Resource	Single-family residence constructed between 1935 and 1940 located at 5085 Parkway Drive.	1996	Unevaluated
003114	-	Historic Resource	Single-family residence constructed in 1940 located at 5100 Lola Street.	1996	Unevaluated
003115	-	Historic Resource	Single-family residence constructed in 1935 located at 5086 Lola Street.	1996	Unevaluated
003116	-	Historic Resource	Single-family residence constructed in 1940 located at 5070 Lola Street.	1996	Unevaluated
003117	-	Historic Resource	Single-family residence constructed in 1940 located at 5066 Lola Street	1996	Unevaluated
003118	-	Historic Resource	Single-family residence constructed in 1945 located at 5060 Lola Street.	1996	Unevaluated
003119	-	Historic Resource	Single-family residence constructed in 1910 located at 5040 Lola Street.	1996	Unevaluated
003120	-	Historic Resource	Single-family residence constructed in 1930 located at 5010 Lola Street.	1996	Unevaluated
003121	-	Historic Resource	Single-family residence constructed in 1925 located at 5945 W. Shaw Avenue.	1996	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
003122	-	Historic Resource	Farm with single-family residence, sales shed, carport and associated farm buildings constructed in 1935 located at 5507 W Shaw Avenue.	1996	Unevaluated
003123	-	Historic Resource	Farm with frame farmhouse constructed 1900-1910 and Adobe structure constructed 1885, located at 5901 W. Shaw Avenue.	1996	Unevaluated
003124	-	Historic Resource	Single-family residence constructed in 1930 located at 5865 W. Shaw Avenue.	1996	Unevaluated
003125	-	Historic Resource	Single-family residence constructed in 1930 located at 5807 W. Shaw Avenue.	1996	Unevaluated
003126	-	Historic Resource	Adobe structure constructed in 1900 located at UTM 11S 241850 mE, 4077145 mN.	1996	Unevaluated
003127	-	Historic Resource	Single-family residence constructed in 1920 located at 5765 W. Shaw Avenue.	1996	Unevaluated
003128	-	Historic Resource	Single-family residence, half adobe structure half stucco covered frame, constructed in 1940 located at 5787 West Shaw Avenue.	1996	Unevaluated
003129	-	Historic Resource	Single-family residence constructed in 1930 located at 5739 West Shaw Avenue	1996	Unevaluated
003130	-	Historic Resource	West Shaw Market constructed in 1930 and located at 5591 West Shaw Avenue	1996	Unevaluated
003131	-	Historic Resource	Single-family residence constructed in 1930 located at 5585 West Shaw Avenue.	1996	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
003132	-	Historic Resource	Highway City Feed & Pet Supplies constructed in 1930 and located at 5525 West Shaw Avenue.	1996	Unevaluated
003133	-	Historic Resource	Single-family residence constructed in 1925 located at 4943 Lola Street.	1996	Unevaluated
003134	-	Historic Resource	Single-family residence constructed in 1940 located at 4933 Lola Street.	1996	Unevaluated
003135	-	Historic Resource	Single-family residence constructed in 1930 located at 4921 Lola Street.	1996	Unevaluated
003136	-	Historic Resource	Single-family residence constructed in 1940 located at 4978 Polk Avenue.	1996	Unevaluated
003137	-	Historic Resource	Single-family residence constructed in 1930 located at 4966 Lola Street.	1996)	Unevaluated
003138	-	Historic Resource	Single-family residence constructed in 1945 located at 5540 Fairmont Avenue.	1996	Unevaluated
003139	-	Historic Resource	Single-family residence constructed in 1930 located at 5530 Fairmont Avenue.	1996	Unevaluated
003140	-	Historic Resource	Peluso's Grocery constructed in 1920 and located at 5495 West Shaw Avenue.	1996	Unevaluated
003141	-	Historic Resource	Single-family residence constructed in 1930 located at 4965 Polk Avenue.	1996	Unevaluated
003142	-	Historic Resource	Single-family residence constructed in 1940 located at 4953 Polk Avenue.	1996	Unevaluated
003143	-	Historic Resource	Single-family residence constructed in 1925 located at 4947 Polk Avenue.	1996	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
003144	-	Historic Resource	Single-family residence constructed in 1940 located at 4937 Polk Avenue.	1996	Unevaluated
003145	-	Historic Resource	Two single-family residences constructed in 1900-1925 located at 5490 Fairmont Street.	1996	Unevaluated
003146	-	Historic Resource	Single-family residence constructed in 1930 located at 5474 Fairmont Avenue.	1996	Unevaluated
003147	-	Historic Resource	Single-family residence constructed in 1930 located at 5464 Fairmont Avenue.	1996	Unevaluated
003148	-	Historic Resource	Single-family residence constructed in 1935 located at 5440 Fairmont Avenue.	1996	Unevaluated
003149	-	Historic Resource	Single-family residence constructed in 1940 located at 4966 Polk Avenue.	1996	Unevaluated
003150	-	Historic Resource	Single-family residence constructed in 1940 located at 4960 Polk Avenue.	1996	Unevaluated
003151	-	Historic Resource	Single-family residence constructed in 1930 located at 4950 Polk Avenue.	1996	Unevaluated
003152	-	Historic Resource	Single-family residence constructed in 1920 located at 4907 State Avenue.	1996	Unevaluated
003153	-	Historic Resource	Single-family residence constructed in 1930 located at 4917 North State Avenue.	1996	Unevaluated
003154	-	Historic Resource	Single-family residence constructed in 1930 located at 4925 N. State Avenue.	1996	Unevaluated
003155	-	Historic Resource	Single-family residence constructed in 1935 located at 4935 State Avenue.	1996	Unevaluated
003156	-	Historic Resource	Single-family residence constructed in 1910 located at 5463 Fairmont Avenue.	1996	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
003157	-	Historic Resource	Single-family residence constructed in 1910-1920 located at 5383 Fairmont Avenue.	1996	Unevaluated
003158	-	Historic Resource	Single-family residence constructed in 1930 located at 4846 Cornelia Street.	1996	Unevaluated
003159	-	Historic Resource	Single-family residence constructed in 1925 located at 4843 North Parkway Drive.	1996	Unevaluated
003160	-	Historic Resource	Single-family residence constructed in 1925 located at 4853 N. Parkway Drive.	1996	Unevaluated
003161	-	Historic Resource	Single-family residence constructed in 1930 located at 4884 Barcus Street.	1996	Unevaluated
003930	003109H	Historic Archaeological Site	Biola Branch Extension Railroad connecting Biola to Kerman in Fresno County. Consists of a 1,417 foot long and 14 foot wide segment with three features: concrete flow-control irrigation box, concrete irrigation culvert and concrete pad constructed in 1929-1930 located 0.5 miles south of the intersection of West Shaw Avenue and Howard Avenue.	1998 1999 2002 2004 2009 2010 2013 2015 2016 2018	Unevaluated
004701	003194	Historic Archaeological Site	Two adjacent concrete pads and broken glass scatter located on the south side of West Shaw Avenue, east of Polk Avenue.	2001	Unevaluated
004702	003195H	Historic Archaeological Site	Empty field with sparse historic artifact scatter. Dating to late 19 th to late 20 th century, artifacts include a well casing and pump, glass, PVC pipe, marble fragments, tile, ceramics, porcelain and concrete fragments.	2001	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
004975	-	Historic Resource	Single-family residence constructed in 1922 located at 5453 West Fairmont Avenue.	1997	Unevaluated
004976	-	Historic Resource	Single-family residence constructed in 1939 located at 4858 North Barcus Avenue.	1997	Unevaluated
004977	-	Historic Resource	Single-family residence constructed in 1946 located at 5531 West Fairmont Avenue.	1997	Unevaluated
004978	-	Historic Resource	Single-family residence constructed in 1932 located at 4909 North Polk Avenue.	1997	Unevaluated
004988	-	Historic Resource	Single-family residence constructed in 1926 located at 5463 West Fairmont Avenue.	1997	Unevaluated
005205	-	Historic Resource	Single-family residence constructed in 1910 located at 4884 North Barcus Avenue.	1997	Unevaluated
005391	-	Historic Resource	Single-family residence and vineyard constructed in 1925-1948 located at 3646 North Cornelia Avenue.	2004	Unevaluated
005392	-	Historic Resource	St. Mary's Parish Church, Parsonage, and ancillary buildings constructed in 1945 located at 4636 West Dakota Avenue.	2004	Unevaluated
005573	CA-FRE-003608H	Historic Resource	Herndon Canal, constructed with earthen levees shored with poured concrete or rock and cement. Constructed circa 1891 and is located within APNs 50506008, 50506074, 50506007, 50506016S, 50506043 and 50506017.	2001 2006 2009 2010	Unevaluated
005648	CA-FRE-003424H	Historic Archaeological Site	Historic San Joaquin River Quarry site constructed in 1914-1945 consisting of four features: two subsurface oil tanks, one subsurface	2007	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
			oil tank with four-chambered concrete oil sump, one weight scale (concrete pad) and one concrete support structure. Loose historic artifact scatter consisting of broken glass, iron pipe, milled lumber, broken concrete and cast iron fragments. The site is located 300 feet to the west of Highway 99.		
005816	-	Historic Resource	Property consisting of eight buildings: one adobe residence, one wood frame residence, two detached garages, one barn, one shed, one adobe fumigating building one pump house, and one metal pole barn. Constructed in 1943 and located at 6785 West Barstow Avenue.	2008 2010	Unevaluated
005829	-	Historic Resource	Epstein Canal; Fresno Irrigation District, 1943.	2008 2010	Unevaluated
006002	-	Historic Resource	Unnamed canal/aqueduct consisting of an approximately 2000 foot segment of earthen-lined, above ground canal, in between shallow levees. Constructed circa 1915 and located at 6506 West Barstow Avenue.	2010	Unevaluated
006003	-	Historic Resource	Single-family residence constructed in 1959 located at 6572 West Barstow Avenue.	2010	Unevaluated
006004	-	Historic Resource	Single-family residence constructed in 1948 located at 6594 West Barstow Avenue.	2010	Unevaluated
006005	-	Historic Resource	Single-family residence constructed in 1951 located at 6610 W. Barstow Avenue.	2010	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDED	NRHP/ CRHR STATUS
006006	-	Historic Resource	Single-family residence constructed in 1956 located at 6844 West Barstow Avenue.	2010	Unevaluated
006007	-	Historic Resource	Single-family residence constructed in 1924 located at 7018 West Barstow Avenue.	2010	Unevaluated
006008	-	Historic Resource	Single-family residence constructed in 1957 located at 6526 West Shaw Avenue.	2010	Unevaluated
006009	-	Historic Resource	Single-family residence constructed in 1920 located at 6665 West Shaw Avenue.	2010	Unevaluated
006010	-	Historic Resource	Single-family residence constructed in 1954 located at 6730 West Shaw Avenue.	2010	Unevaluated
006027	-	Historic Resource	Single-family residence constructed in 1949 located at 4901 North Polk Avenue.	2001	Unevaluated
006028	-	Historic Resource	Single-family residence constructed in 1930 located at 4951 North Lola Avenue.	2001	Unevaluated
006029	-	Historic Resource	Single-family residence constructed in 1945 located at 4967 North Lola Avenue.	2001	Unevaluated
006030	-	Historic Resource	Single-family residence constructed in 1949 located at 5075 North Parkway Avenue.	2001	Unevaluated
006031	-	Historic Resource	Marcelli Terrace is a 12 building housing complex consisting of single story wood framed duplexes. Constructed in 1952 and located at 5323 West Fairmont Avenue.	2001	Unevaluated

PRIMARY NO. (P-10)	TRINOMIAL NO. (CA-FRE-)	RESOURCE TYPE	RESOURCE DESCRIPTION	YEAR RECORDE D	NRHP/ CRHR STATUS
006130	CA-FRE- 003609H	Historic Resource	Herndon-Kearney Transmission Line is an approximately one-mile segment consisting of six steel lattice towers with each tower conveying a single circuit, of two sets of three, conductors and a pair of aerial ground wires. Constructed in 1946-1963 located south of the Herndon Substation crossing over State Route 99.	2010	Unevaluated

OTHER SOURCES

In addition to the SSJVIC records search, a variety of sources were consulted in August 2019 to obtain information regarding the cultural context of the Project Area (Table 4). Sources included the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), California Historical Resources Inventory (CHRI), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 4. Additional Sources Consulted

SOURCE	RESULTS
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative.
Historic USGS Topographic Maps	Historic topographic maps, from 1923 (Bullard 7.5x15 minute) to approximately 1965 (Fresno North 7.5 minute map) the vast majority of the Project area was occupied by farmland and various farmhouses. By 1972-1981 (Fresno North, 7.5 min.), significant development is shown spreading throughout the Project Area, appearing similar in development density as it does today.
Historic US Department of Agriculture (USDA) Aerial Photographs	As seen in the earliest historic aerials, from 1962 and 1972 tract homes are slowly replacing farmland as they spread west of SR-99 through the Project Area. By 1998, nearly a third of the Project Area has been developed which closely resembles the area's built environment at it exists today.
California Register of Historical Resources (CRHR; 1992-2014)	Negative.
California Historical Resources Inventory (CHRI; 1976-2014)	Negative.
California Historical Landmarks (CHL; 1995 & supplements to 2014)	Negative.
California Points of Historical Interest (CPHI; 1992 to 2014)	Negative.
Historical Societies	4 historical societies were contacted. No one has responded with concerns regarding the SP.
Bureau of Land Management (BLM) General Land Office Records	Negative.

Local historical societies and libraries were contacted in August 2019 and included the Fresno Historical Society, Eastern Fresno County Historical Society, Fresno County Historical Museum, and the Hiebert Library at Fresno Pacific University. No additional information or comments were provided.

NATIVE AMERICAN CONSULTATION

Cogstone submitted a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC) on July 18, 2019. The NAHC responded on August 13, 2019, that there are known sacred lands within the Fresno West Area SP. The NAHC recommended that 13 representatives from local Native American tribal organizations be contacted for further information regarding the Project vicinity.

Consultation letters were sent via certified mail on August 20, 2019 requesting information related to cultural resources or heritage sites within the Fresno West Area SP. Additional attempts at contact were made by email or phone on September 6 and September 19, 2019. To date, three responses have been received and are summarized below. All consultation correspondence and a contact log are provided in Appendix C.

- On 8/26/2019 Mr. Charley, tribal secretary for the Dunlap Band of Mono Indians, responded via phone that the SP is outside the Tribe's interest and that they would not be commenting or requesting consultation. Mr. Charley recommended contacting Big Sandy or Table Mountain Rancheria for comments.
- On 9/19/2019 Mr. Alec of the Kings River Choinumni Farm Tribe, responded via phone that the Tribe has no concerns with the SP.
- On 8/6/2019, Mr. Pennell, Cultural Resources Director of the Table Mountain Rancheria, responded with by letter stating that the Tribe is interested in the SP and requested any cultural resource reports received from the record search. Mr. Pennell requested that the City contact the Tribal office to coordinate a discussion and meeting date for the SP. On 10/7/2019 Cogstone replied to Mr. Pennell with the results of the cultural records search.

SENSITIVITY

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers within the BLM as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system (BLM 2016; Appendix D) has a multi-level scale based on demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings.

Fossil resources occur in geologic units (e.g., formations or members). The probability for finding significant fossils in a project area can be broadly predicted from previous records of

fossils recovered from the geologic units present in and/or adjacent to the study area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria

All alluvial deposits may increase or decrease in fossiliferous potential depending on how coarse the sediments are. Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 mm or less in diameter. Moreover, fossil preservation also greatly increases with rapid burial in flood-plains, rivers, lakes, oceans, etc. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of flood-plains, rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant for the value assignment.

No fossils are known from the study area or the Fresno area proper (City of Clovis 2014, Finger 2017, Dundas 2019, McLeod 2019). Although fossils may occur in artificial fill, any present would not be *in situ* and therefore not scientifically relevant. As such all fill has a very low potential for fossils (PFYC 1). The river deposits are assigned a low potential for fossils (PFYC 2) due to the Holocene age. While numerous fossils have been recovered from the Modesto Formation, all fossils where the depth was known were recovered more than seven feet below the original ground surface. The upper seven feet of the Modesto Formation are assigned a low potential for fossils (PFYC 2) due to the lack of fossils previously recovered. Modesto Formation sediments more than seven feet below the original ground surface are assigned a moderate but patchy potential for fossils (PFYC 3a) due the presence of numerous fossils found in other areas of the San Joaquin Valley. The Riverbank Formation is assigned a low potential for fossils (PFYC 2) based on the lack of fossils recovered previously (Table 5, Figure 2).

Table 5. Paleontological Sensitivity Rankings

Rock Unit	PFYC rankings					
	5 very high	4 high	3a moderate; patchy	3b moderate; undemonstrated	2 low	1 very low
artificial fill, modern						X
river deposits, Holocene					X	
Modesto Formation, late Pleistocene			more than 7 feet deep		less than 7 feet deep	
Riverbank Formation, middle Pleistocene					X	

ARCHAEOLOGICAL RESOURCES SENSITIVITY

No prehistoric archaeological sites have been previously recorded within the Fresno West Area SP. Unknown resources may be present.

Only four historical archaeological sites have been recorded in the Fresno West SP. Three of the historic archaeological sites are in the vicinity of the Teague School and one historic archaeological site, the San Joaquin River Quarry, is located just south of Highway 99 in the northern portion of the SP.

HISTORICAL RESOURCE SENSITIVITY

Historical resources include current and former locations of historic buildings, historical archaeological sites (often near historic use areas) and the location of extant historic homes more than 45 years old. The majority of the historic built resources are historic residences clustered around North Polk Avenue and West Acacia Avenue.

MITIGATION MEASURES

MM PAL-1. Planned mass excavations more than seven feet below the original ground surface into the Modesto Formation shall require a paleontological assessment and potentially paleontological mitigation. “Mass excavations” includes excavations conducted by excavator, scrapers, dozers, etc. which allow the context of the fossil to be observed. Context includes information such as depth/elevation, formation identification, and other data that can be critical to scientific significance. Mass excavations excludes all work conducted by augers, pile drivers, pot-holing or other similar activities where context cannot be accurately determined. If unanticipated discoveries of paleontological resources occur during construction, all work within

50 feet of the discovery should be halted until the find has been evaluated by a qualified paleontologist.

MM CUL-1. City staff shall require applicants for future proposed projects with intact extant building(s) more than 45 years old to provide a historic resource technical study evaluating the significance and data potential of the resource. If significance criteria are met, detailed mitigation recommendations are required as part of the technical study. All work shall be performed by a qualified architectural historian meeting Secretary of the Interior Standards.

MM CUL-2. The City shall have a standard condition in every grading and excavation permit that requires applicants to halt work upon discovery of any unanticipated buried cultural resources until it can be evaluated by qualified professionals. Work may resume immediately at least 50 feet away from the discovery. A list of qualified cultural resources consultants is maintained by the California Office of Historic Preservation at www.chrisinfo.org.

MM CUL-3. Unanticipated discoveries of human remains shall require immediate cessation of ground disturbance within 50 feet and notification to City staff and the Coroner and shall follow state law as stated in Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

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2003 *Testing and Mitigation at Four Sites on Level (3) Long Haul Fibre Optic Alignment, Colusa County, California*. Archaeological Research Program, California State University, Chico. Report prepared for Kiewit Pacific, Concord.

U.S. Census Bureau

1910 “Thirteenth Census of the United States Taken in the Year 1910: California, Chapter 1. Number of Inhabitation.” Washington: Government Printing Office.

USGS Historic Topographic Map Explorer

1923 USGS Bullard, 7.5x15 minute map, accessed online at <http://historicalmaps.arcgis.com/usgs/> on August 2019

1965 USGS Fresno North, 7.5 minute map, accessed online at <http://historicalmaps.arcgis.com/usgs/> on August 2019

1972 USGS Fresno North, 7.5 minute map, accessed online <http://historicalmaps.arcgis.com/usgs/> on September 2019

1981 USGS Fresno North, 7.5 minute map, accessed online <http://historicalmaps.arcgis.com/usgs/> on September 2019

APPENDIX A. QUALIFICATIONS

EDUCATION

2009 M.A., Anthropology, Kent State University, Kent, Ohio
2006 B.A., Anthropology, Ohio State University, Columbus, Ohio

SUMMARY QUALIFICATIONS

Ms. Valasik is a Registered Professional Archaeologist (RPA) with over 10 years of professional and academic archaeological field and research experience. She has conducted technical studies and prepared cultural resources reports for CEQA/EIR compliance documents for project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial, and industrial developments. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and in working with a variety of federal, state, and local agencies throughout California. She is accepted as a principal investigator for prehistoric archaeology by the State Office of Historic Preservation's Information Centers.

SELECTED PROJECTS

Irvine General Plan Update - Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Principal Investigator for Archaeology. 2018-2019

La Verne General Plan Update, City of La Verne, Los Angeles County, CA. Cogstone reviewed and summarized available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of La Verne to support an update of the City's General Plan. Cogstone conducted archaeological and paleontological record searches, extensive historical research at City Hall, a Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC), and a general analysis of impacts of future projects within the city that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to De Novo. Principal Investigator for Archaeology. 2018

Agora Town Center Mixed-Use EIR, Laguna Niguel, Orange County, CA. Conducted due diligence review of the previous environmental document. Prepared updated cultural and paleontological sections, including updated records search. The project also involved preparation of a new Tribal cultural resources section; and assisting the City of Laguna Niguel with combined SB 18/AB52 consultation and outreach. Sub to PlaceWorks. Principal Investigator for Archaeology. 2016

Lyon Subdivision EIR, City of Coto de Caza, Orange County, CA. Conducted a cultural resources technical study to support preparation of an EIR on behalf of the developer for the proposed subdivision of an existing large estate for development of 28 new residential lots on approximately 50-57 acres of land. The existing land is predominantly a citrus orchard. Services included records search, Sacred Lands search, Native American consultation, GIS mapping, and intensive-level pedestrian survey with negative results. The lead agency for the Project is the City of Coto de Caza. Sub to CAA Planning. Principal Investigator for Archaeology. 2015

Shoppes at Corona Vista Specific Plan, City of Corona, Riverside County, CA. The Project involves the construction of a shopping center and a church, and includes a specific plan amendment for a 7.25-acre site situated within a former citrus growing community. Services included archaeological, paleontological and historical records searches, NAHC consultation, pedestrian survey and prepared technical reports. One historic resource, a Craftsman bungalow, was recorded. A DPR 523 site record was completed. The building was evaluated for eligibility for listing on the California Register of Historic Resources (CRHR) and determined not eligible. Sub to Applied Planning. Principal Investigator for Archaeology & Co-Author. 2015

EDUCATION

2013 M.S., Biology, with paleontology emphasis, California State University, San Bernardino
2000 B.S., Geology, with paleontology emphasis, University of California, Los Angeles

SUMMARY QUALIFICATIONS

Ms. Scott has 21 years of experience in California as a paleontologist and sedimentary geologist. She has worked extensively in the field surveying, monitoring, and salvaging fossils on over 100 projects. In addition, she has special skills in fossil preparation (cleaning and stabilization) and in the preparation of stratigraphic sections and other documentation for fossil localities. She has written over 100 assessments and monitoring compliance reports to all agency requirements. Ms. Scott serves as company safety officer and is the author of the company safety and paleontology manuals. She is a Member of the Society of Vertebrate Paleontology and the Geological Society of America.

SELECTED PROJECTS

Irvine General Plan Update - Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Principal Paleontologist. 2018-2019

City of La Verne General Plan Update Project, Los Angeles County, CA. The project involved review and summary of available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of La Verne to support an update of the City's General Plan. Scott co-authored the Cultural and Paleontological Assessment. Sub to De Novo Planning Group. Principal Paleontologist/Report Co-author. 2018

Westminster General Plan Update EIR, City of Westminster, Orange County, CA. Prepared paleontological resources assessment to support the General Plan Update. The study area included the entire city, spanning 6,590 acres. Services involved records search, GIS mapping. Impact analysis determined negative results. Sub to PlaceWorks. Principal Investigator/Author of Paleontological Report. 2015-2016

Temecula Gateway EIR, City of Temecula, Riverside County, CA. A Planned Development Overlay/Zone Change and General Plan Amendment. The applicant intended to change the General Plan designation to Community Commercial. The Planned Development Overlay would allow for a mixture of uses intended to provide for the development of a variety of local and tourist-serving commercial development. Prepared an assessment report for a 9-acre parcel for the EIR. Sub to PMC. Co-Principal Investigator/Report Co-author. 2015

Valley Boulevard Specific Plan and EIR, Cities of Fontana and Bloomington, San Bernardino County, CA. The Project proposes to maintain and improve existing private and community assets with land use change. Land use changes would involve replacing current conventional zoning districts with five Specific Plan land use districts; Mixed Use, Bloomington Enterprise, Commercial, Low and Medium Residential, and Medium and High Residential districts. Co-Principal Paleontologist/Report Co-author. 2015

Yucaipa General Plan Update and Program EIR, City of Yucaipa, San Bernardino County, CA. The project involved a comprehensive update to the Yucaipa General Plan, an Initial Study, a Program Environmental Impact Report (EIR), a Mitigation Monitoring or Reporting Program (MMRP), and the Findings of Fact and Statement of Overriding Considerations (SOC) for an advanced planning project proposal on behalf of the City of Yucaipa Community Development Department. Conducted record search, Sacred Lands search, NAHC consultation, GIS mapping, cultural and paleontological resources sensitivity analysis, and reporting. Sub to PlaceWorks. Co-Principal Investigator/Report Co-author. 2014

EDUCATION

1994 M. S., Anatomy, University of Southern California, Los Angeles
1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Ms. Gust is a Registered Professional Archaeologist and Qualified Principal Paleontologist with more than 35 years of experience in cultural resources management and consulting in California. She has conducted technical studies and prepared cultural resources chapters for CEQA/EIR compliance documents for project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial and industrial developments. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. Ms. Gust holds current BLM permits for cultural and paleontology in California and is certified by all counties and cities in California that maintain lists. She is accepted as a principal investigator for both prehistoric and historical archaeology by the State Office of Historic Preservation's Information Centers.

SELECTED PROJECTS

Tustin Downtown Commercial Core Specific Plan Project, City of Tustin, Orange County, CA. Cogstone performed archaeological and paleontological resources assessments in compliance with CEQA for a 220-acre portion of the City of Tustin. The assessment included an inventory of all historic-era buildings, the preparation of GIS Maps for the entire Specific Plan area, and preparation of a combined cultural and paleontological assessment report with recommendations. Sub to EPD Solutions, Inc. Principal Investigator for Archaeology & Co-Author. 2017

Westminster General Plan EIR, City of Westminster, Orange County, CA. Performed archaeological and paleontological programmatic technical study including record searches, Native American consultation, and prepared report with recommendations. Sub to Placemarks. Principal Investigator for Archaeology and Paleontology. 2016

Alton Parkway Mixed Use Development, City of Irvine, Orange County, CA. Cogstone conducted a literature review followed by archaeological and paleontological monitoring during ground disturbing activities for construction of a four-story residential development on a 3.7-acre site. Subsequently, Cogstone prepared a monitoring compliance report to fulfill the City of Irvine's Existing Plans, Programs, and Policies mitigation measure. Project Manager. 2016

Hidden Oaks Country Club Specific Plan and TT 18869, City of Chino Hills, San Bernardino County, CA. Managed cultural and paleontological resources assessments, assisted the City with SB 18 compliance, and responded to the cultural section of the project EIR comment for this proposed 537-acre residential project with minimum 5-acre per lot constraints. Services included records search, Sacred Lands search, NAHC consultation, field survey, and mitigation recommendations. Principal Investigator. 2015-2016

Paradise Valley Specific Plan, Glorious Land Company, unincorporated Riverside County, CA. The project involves construction of a 5,411 acre resort community. Prepared Supplemental Phase I Cultural Resources Assessment Report and Final Paleontological Assessment Report. Sub to Envicom. Principal Investigator. 2011-2014

Historic Town Center Master Plan Update EIR, City of San Juan Capistrano, Orange County CA. Conducted a survey and assessment to determine the potential effects on cultural resources of potential changes to the Historic Town Center Master Plan area in support of a project-level EIR. Managed archaeological and paleontological record searches, research, and survey plus Native American consultation for the 31-acre town center. Evaluated resources, including updated site records and impact assessment. Sub to Templeton Planning Group. Principal Archaeologist/Paleontologist & Author. 2011

EDUCATION

- 2018 M.A., History (with an emphasis in architecture), California State University, Fullerton
2012 B.A., History, Minor in Asian-Pacific Studies, California State University, Dominguez Hills

SUMMARY QUALIFICATIONS

Ms. Lopez is a qualified historian and she meets the Secretary of the Interior's *Professional Qualifications for Standards* for history. Ms. Lopez is experienced in architectural history research and surveys along with photo documentation and recording of built environment resources for local and federal projects. Additionally, she is an approved Reader at the Huntington Library by the Los Angeles Office of Historic Resources.

SELECTED PROJECTS

Irvine General Plan Update, Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Architectural Historian. 2018-2019

737 S. Oxford Ave. Apartments Project, City of Los Angeles, Los Angeles County, CA. The purpose of this study was to determine the potential effects to cultural and paleontological resources resulting from the construction of a new seven-story, 92-unit apartment building with a single level subterranean parking garage. The project area was open ranching and agricultural lands until development began in the early 20th century. By 1918, two single family homes with detached garages were present on the property with nearly two dozen homes around the project area as well a handful of empty lots. Cogstone conducted a survey, documented the building proposed for demolition within the project area, and prepared a cultural resources assessment. Architectural Historian. 2018

Rhode Island Historical Resource Archive of Melville Naval Historic District and U.S. Naval Hospital, Newport Historic District, Naval Station Newport, R.I. This purpose of this project is to produce Rhode Island Historical Resources Archive (RIHRA) documentation of the Melville Naval Historic District and the U.S. Naval Hospital Newport Historic District, at Naval Station (NAVSTA) Newport, Newport, Rhode Island. Conducted research, form contributor, and assistant Architectural Historian. 2018

2525 N. Main, City of Santa Ana, Orange County, CA. The project proposed demolition of existing building and the construction of a five-story multi-family residential apartment complex. Cogstone conducted a cultural and historic resources records search, a field visit to known historic homes and Santiago Park, evaluation of the historic resources, and produced a built environment report. Conducted research, evaluation and co-author. Architectural Historian. 2018

La Verne General Plan Update, City of La Verne, Los Angeles County, CA. Cogstone reviewed and summarized available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of La Verne to support an update of the City's General Plan. Ms. Lopez guided the extensive historical research at City Hall where building records, Mills Acts, photographs and other documents were reviewed. Sub to De Novo. Co-Architectural Historian. 2018

Accelerated Charter Elementary School, Los Angeles Unified School District, City of Los Angeles, Los Angeles County, CA. The project involved the construction of a new facility on a 2.3-acre site in South Central Los Angeles. Cogstone conducted paleontological and cultural resources monitoring. Five new archaeological sites were defined and updated one building record. Updated building DPR. Sub to Gafon. Assistant Architectural Historian. 2017

EDUCATION

2009 B.A., Archaeology/History, Simon Fraser University, Canada

SUMMARY QUALIFICATIONS

Ms. Duke is a qualified archaeologist and cross-trained paleontologist with six and a half years of experience in pedestrian survey, monitoring, excavation and burial recovery, as well as the identification of human and faunal skeletal remains. She is proficient in the preparation of cultural resources assessment reports for a variety of state and local agencies throughout California. Duke is responsible for the organization of field data, lab supervision and organization, as well as identifying and cataloging prehistoric and historic artifacts. She also has experience with preparing artifact collections for curation at a variety of different repositories as well as fossil preparation and stabilization.

SELECTED PROJECTS

TetraGro Lancaster Project, City of Lancaster, Los Angeles County, CA. The project consisted of a cultural resources assessment for the construction of a 22,000 square foot medical cannabis cultivation center with a clean anodized aluminum façade. Provided task management and supervised all work for the project which included a records search and an intensive pedestrian survey. Authored the Cultural Resources Assessment Report. Task Manager. 2018

West Bastanchury Residential Subdivision Project, City of Yorba Linda, Orange County, CA. The project consisted of a cultural and paleontological resources assessment for the creation of a tentative tract map to subdivide a 13-acre City-owned lot into 23 residential lots. Provided task management and supervised all work for the project which included a records search and an intensive pedestrian survey. Authored the Cultural Resources Assessment Report. Task Manager. 2017

Crowder Canyon, Caltrans District 8, San Bernardino County, CA. The project consisted of the realignment of SR-138. Participated in the archaeological testing and data recovery of two archaeological sites near Hesperia. Conducted excavation and data recovery of more than six prehistoric features. Sub to Applied Earthworks. Archaeologist. 2016

Cold Canyon Landfill Expansion, South Berm Soil Removal Module 11, Arroyo Grande, San Luis Obispo County, CA. Conducted archaeological testing of the historic Patchett-Weir family site (CA-SLO-2559H) to assess its eligibility for listing on the National Register of Historic Places. The site would be impacted by landfill expansion and Army Corps of Engineers wetland restoration. Supervised the excavation of mechanically excavated trenches and hand excavated a unit within the site. Cataloged 20 historic-age artifacts recovered during excavation. Archaeologist. 2016

Fisher House and Golf Course Parking Lot Project, Veterans Affairs Long Beach Healthcare System, City of Long Beach, Los Angeles County, CA. In compliance with the Historic Properties Treatment Plan, supported an archaeological testing program to identify cultural resources by utilizing ground penetrating radar and magnetometry, shovel test pits, and mechanical excavation. Recovered numerous historic artifacts from a trash dump during ground disturbing activities within the Golf Course Parking Lot project area. Cleaned, identified, and cataloged all recovered artifacts. Monitored excavation for utilities at Golf Course Parking Lot project. Prime. Archaeologist/Lab and Data Manager. 2015-2016

APPENDIX B. MUSEUM PALEONTOLOGICAL RECORDS SEARCH



Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

1 August 2019

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Logan Freeberg, GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed
Fresno West Project, Cogstone Project # 4669, in the City of Fresno, Fresno
County, project area

Dear Logan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Fresno West Project, Cogstone Project # 4669, in the City of Fresno, Fresno County, project area as outlined on the portions of the Herndon and Fresno North USGS topographic quadrangle maps that you sent to me via e-mail on 18 July 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have fossil vertebrate localities somewhat nearby that occur in sedimentary deposits similar to those that occur in the proposed project area.

According to the geologic mapping surface deposits for the entire proposed project area consist of soil on top of late Pleistocene deposits of the Riverbank Formation. We do not have any vertebrate fossil localities specifically designated as coming from the Riverbank Formation, but our closest vertebrate fossil locality from these deposits, LACM 7254, northwest of the proposed project area on the south side of Ash Slough northeast of Chowchilla, produced a fossil specimen of elephantoid, Proboscidea.

Shallow excavations in the soil and Riverbank Formation deposits that occur superficially throughout the proposed project area may not uncover significant fossil vertebrate remains.

Deeper excavations that extend down into older sedimentary deposits, however, may well encounter significant vertebrate fossil remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossil materials uncovered during mitigation activities should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

A handwritten signature in cursive script that reads "Samuel A. McLeod".

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX C. NATIVE AMERICAN CONSULTATIONS

Tribal Consultation Log for the Fresno West Area Specific Plan

Native American Group	First Name	Last Name	Title	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Attempt	Date(s) and Method of Third Attempt	Date(s) of Replies Rec'd	Comments
Big Sandy Rancheria	Elizabeth D.	Kipp	Chairperson	8/20/2019, Certified US Mail	9/4/2019, email	9/19/2019, Phone/voicemail message	No Response	
Cold Springs Rancheria	Carol	Bill	Chairperson	8/20/2019, Certified US Mail	9/6/2019, email	9/19/2019, Phone, email	No Response	Cold Springs Rancheria has a new Chair, Helena Alarcon. Follow up email was sent to her emai
Dumna/Wo-Wah Tribal Government	Robert	Ledger Sr.	Chairperson	8/20/2019, Certified US Mail	9/6/2019, email	9/19/2019, Phone, email	No Response	Chairperson Ledger requested email with original letter to be resent to his email for review. The letter was resent.
Dunlap Band of Mono Indians	Benjamin	Charley Jr.	Tribal Chair	8/20/2019, Certified US Mail	-	-	8/26/2019 phone	On 8/26/2019 Mr. Charley, tribal secretary for the Dunlap Band of Mono Indians, responded via phone that the SP is outside the Tribe's interest and that they would not be commenting or requesting consultation. Mr. Charley recommended contacting Big Sandy or Table Mountain Rancheria for comments.
Dunlap Band of Mono Indians	Dick	Charley	Tribal Secretary	8/20/2019, Certified US Mail	-	-	8/26/2019 phone	See above for Mr. Charley
Kings River Choinumni Farm Tribe	Stan	Alec		8/20/2019, Certified US Mail		9/19/2019, Phone	9/19/2019 phone	On 9/19/2019 Mr. Alec of the Kings River Choinumni Farm Tribe, responded via phone that the Tribe has no concerns with the SP.
North Fork Mono Tribe	Ron	Goode	Chairperson	8/20/2019, Certified US Mail	9/6/2019, email	9/19/2019, Phone/voicemail message	No Response	
Santa Rosa Rancheria, Tachi Yokut Tribe	Rueben	Barrios Sr.	Chairperson	8/20/2019, Certified US Mail		9/19/2019, Phone/voicemail message	No Response	
Table Mountain Rancheria	Leanne	Walker-Grant	Chairperson	8/20/2019, Certified US Mail		-	No Response	

Native American Group	First Name	Last Name	Title	Date(s) and Method of First Contact Attempt	Date(s) and Method of Second Attempt	Date(s) and Method of Third Attempt	Date(s) of Replies Rec'd	Comments
Table Mountain Rancheria	Bob	Pennell	Cultural Resources Director	8/20/2019, Certified US Mail	9/6/2019, email	-	8/6/2019 Letter	On 8/6/2019, Mr. Pennell, Cultural Resources Director of the Table Mountain Rancheria, responded with by letter stating that the Tribe is interested in the SP and requested any cultural resource reports received from the record search. Mr. Pennell requested that the City contact the Tribal office to coordinate a discussion and meeting date for the SP. On 10/7/2019 Cogstone replied to Mr. Pennell with the results of the cultural records search.
Traditional Choinumni Tribe	David	Alvarez	Chairperson	8/20/2019, Certified US Mail	9/6/2019, email undeliverable	-	No Response	
Traditional Choinumni Tribe	Rick	Osborne	Cultural Resources	8/20/2019, Certified US Mail	9/6/2019, email	9/19/2019, Phone/voicemail message	No Response	
Wuksache Indian Tribe/Eshom Valley Band	Kenneth	Woodrow	Chairperson	8/20/2019, Certified US Mail	9/6/2019, email	9/19/2019, Phone/voicemail message	No Response	



2600 Fresno Street, Room 3065
Fresno, California 93721-3604
(559) 621-8003
www.fresno.gov

Planning and Development Department

Jennifer K. Clark, AICP, HDFF
Director

[MONTH, DAY, YEAR]

[FIRST LAST]

[TRIBE]

[TITLE/ROLE]

[ADDRESS, STREET]

[CITY, CA, ZIP]

RE: CEQA and SB 18 Consultation Request for the Specific Plan of the West Area, City of Fresno, Fresno County, California.

[TITLE & LAST NAME]:

The City of Fresno (City) proposes to develop the Specific Plan of the West Area Project (Project). The Project will refine the City's General Plan for the West Area by implementing a specific development plan including roadway and sidewalk networks and maintenance as well as an updated designated zoning plan for land use areas including but not limited to commercial, residential, employment (i.e. business park), mixed use, open space (i.e. parks), and public facilities (i.e. school and emergency response) for the continued growth, safety, and necessity of the City's residents (see Figure 1). The Project encompasses an approximately 7,077-acre triangular portion of the northwest area of the City west of State Route 99 with a 160-acre "alternative study area" in the southwest corner. It is bounded by State Route 99 to the northeast; Garfield Avenue to the west and Clinton Avenue to the south (see Figures 2-6). This Project will comply with CEQA regulations and an Environmental Impact Report that is being prepared. The City of Fresno will be the lead CEQA Agency.

We are contacting you because the [TRIBE] requested to be notified and provided information, under the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21080.3.1 subdivisions (b), (d) and (e)), also known as AB 52, regarding projects with the City of Fresno's jurisdiction and within the traditional territory of the [TRIBE]. Please consider this letter and preliminary Project information as the formal notification of the proposed Project. The City of Fresno is requesting to consult with the [TRIBE] in order to identify tribal cultural resources that may be impacted by the proposed Project. The point of contact for the City of Fresno is below.

City of Fresno Point of Contact Information	
Name/Title:	Rodney L. Horton, MPA Planner III Planning and Development Department
Address:	2600 Fresno Street, Rm 3065
City:	Fresno, CA 93721
Tel:	(Office) 559-621-8181
E-Mail:	Rodney.Horton@fresno.gov

Additionally, the City of Fresno is requesting consultation under Senate Bill 18 (Chapter 905, Statutes of 2004) which requires local governments to consult with tribes prior to making certain planning decisions and requires consultation and notice for a general and specific plan adoption or amendment in order to preserve, or mitigate impacts to, cultural places that may be affected. The Native American Heritage Commission (NAHC) provided us with a list of tribal entities and individuals who have requested to be placed on the SB 18 consultation list. The [TRIBE] is on the list provided. As a result, please consider this letter as a notice of the Project and an invitation to provide comments regarding the Project.

Cogstone Resource Management, Inc. (Cogstone) has been retained to assist the City of Fresno with their cultural resources assessment of the Project area

The Native American Heritage Commission (NAHC) was contacted on July 18, 2019 to perform a search of the Sacred Lands File. The NAHC responded on August 13, 2019 and reported positive for Native American sacred sites and/or heritage resources located within the Project area or the immediate vicinity.

Cogstone requested a record search of the entire Project area from the Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield on July 18, 2019. Cogstone received the results of the records search on July 30, 2019. A total of 82 cultural resources are located within the Project area, all of which are historic resources. Of these, 78 are historic built environment resources and four are historic archaeological sites. No prehistoric archaeological sites have been recorded within the Project area. A pedestrian survey is not required for this Project.

We would appreciate receiving any comments, issues and/or concerns relating to cultural resources, sacred lands, and tribal cultural resources that you may have within the Project area. All information provided will be kept confidential.

Please respond within 30 days, pursuant to PRC 21080.3.1(d), if you would like to consult on this Project under CEQA. For consultation under SB 18, **you have 90 days to respond**. If you have any questions please contact Emily Barton, Cogstone, by phone (714-974-8300), email (cogstoneconsult@cogstone.com), or fax (714-974-8303) or you can contact me at the address and phone number above.

Thank you for your assistance.

Rodney L. Horton, MPA
Planner III
Planning and Development Department

Attachments: Project vicinity map
Project location maps (5)

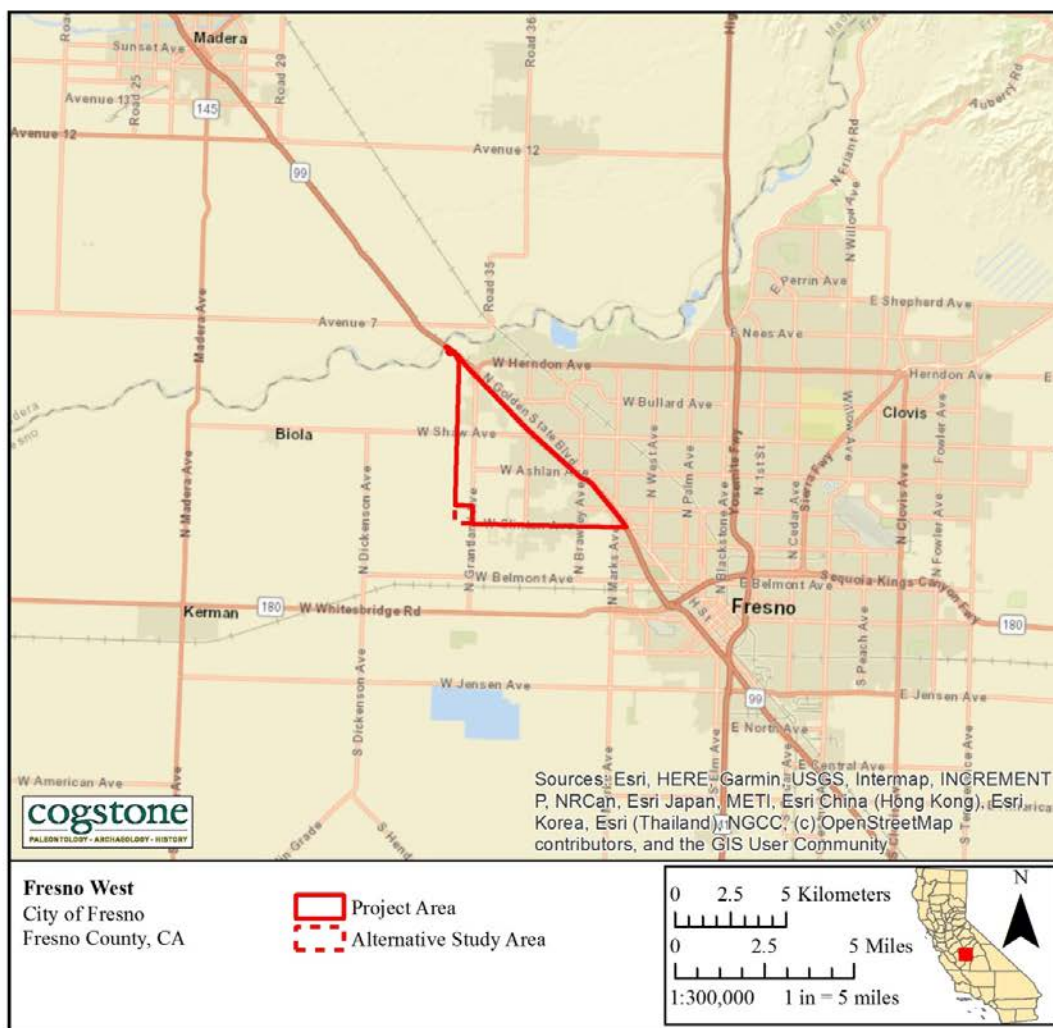


Figure 1. Project vicinity map

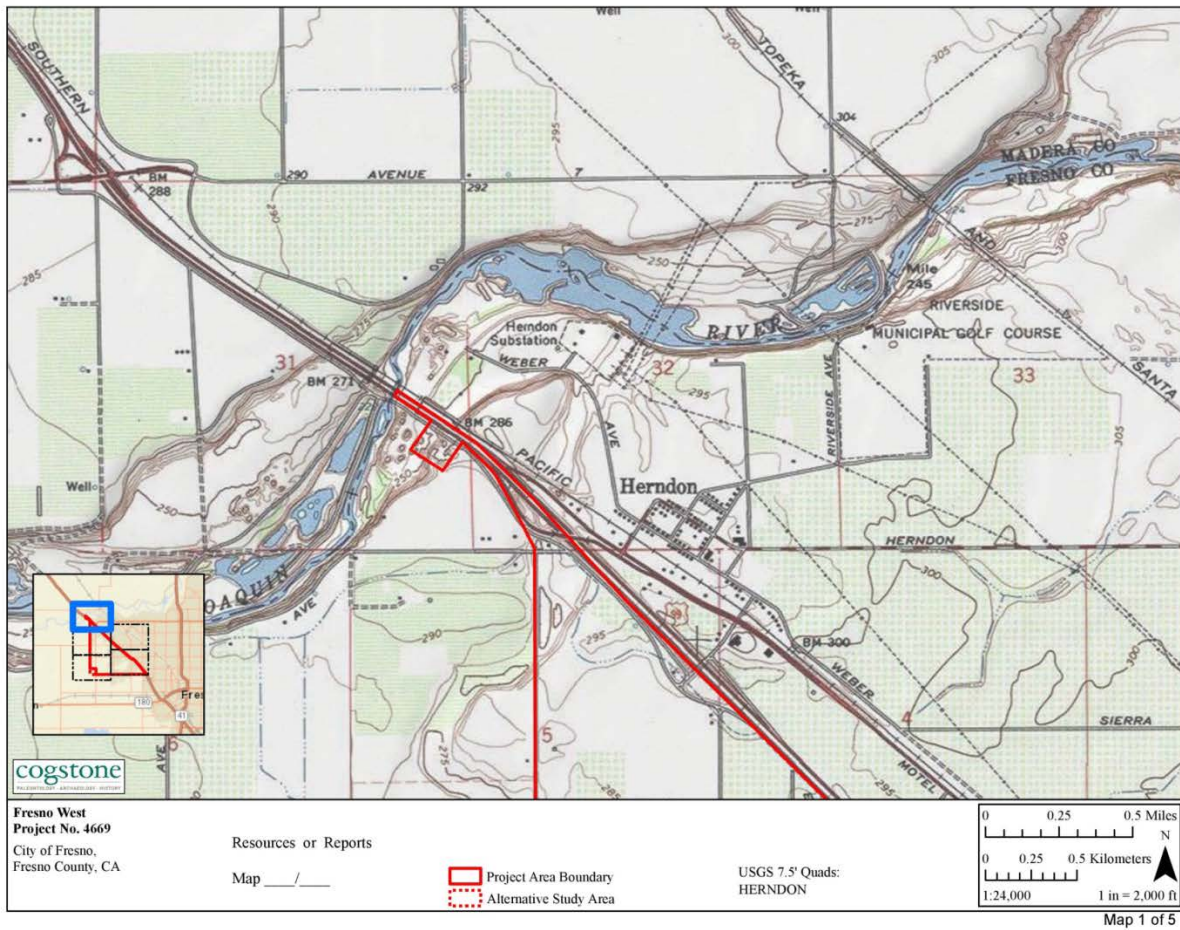


Figure 2. Project location map 1

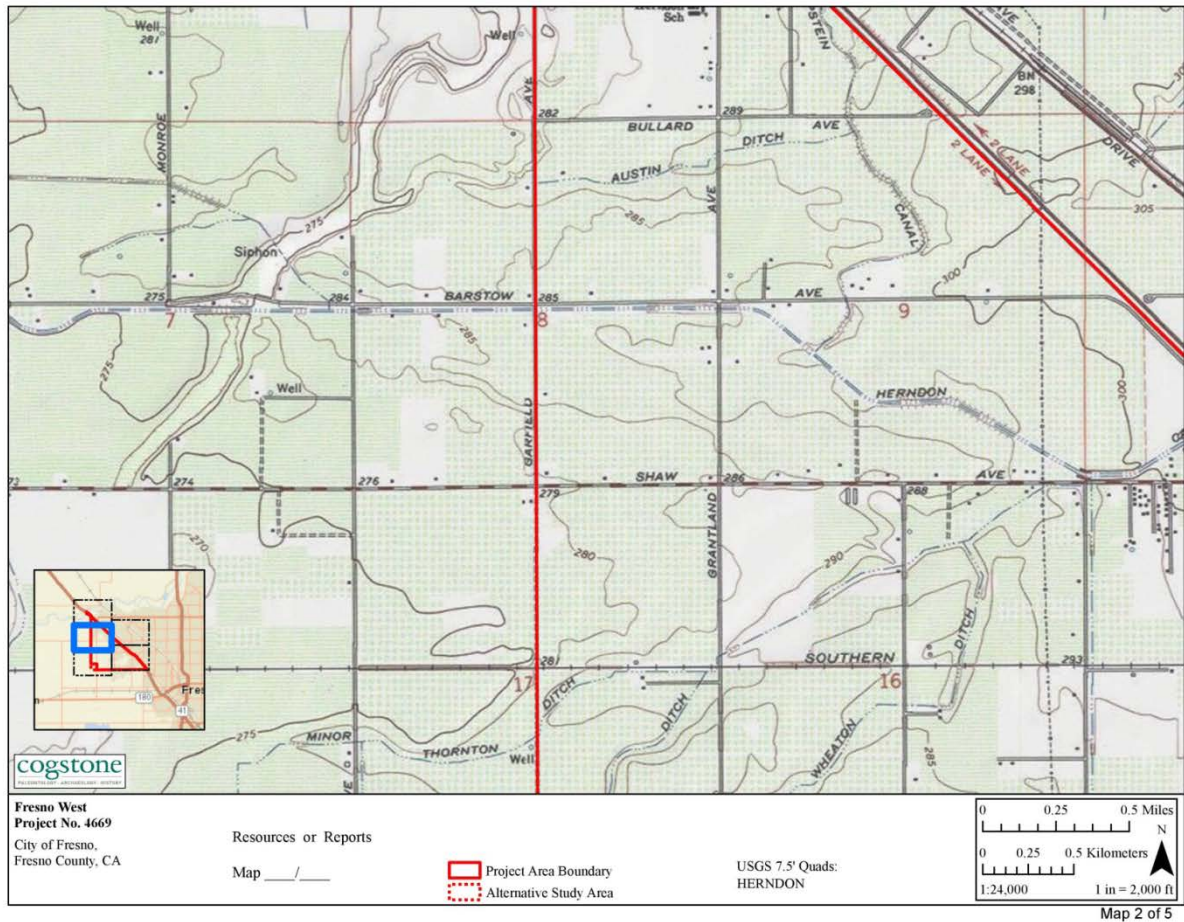


Figure 3. Project location map 2

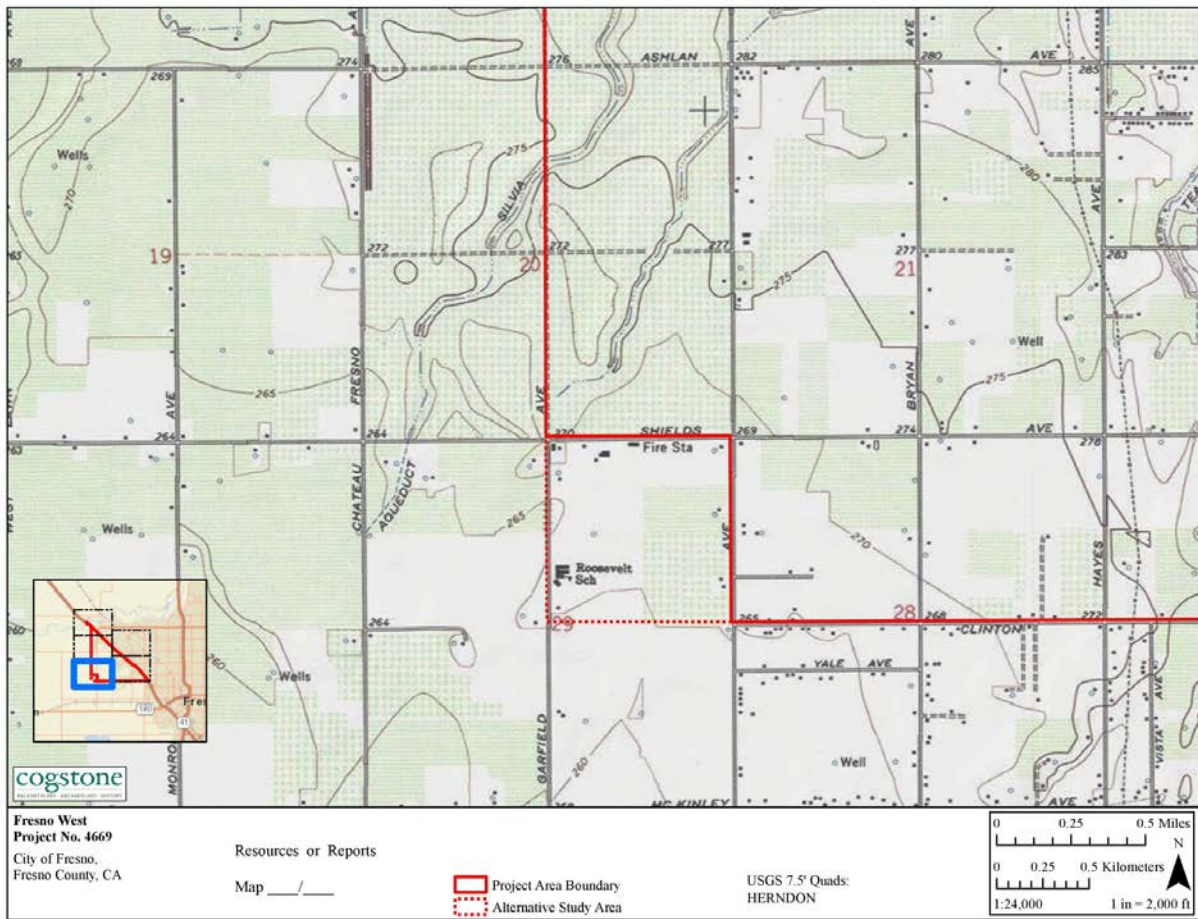


Figure 4. Project location map 3

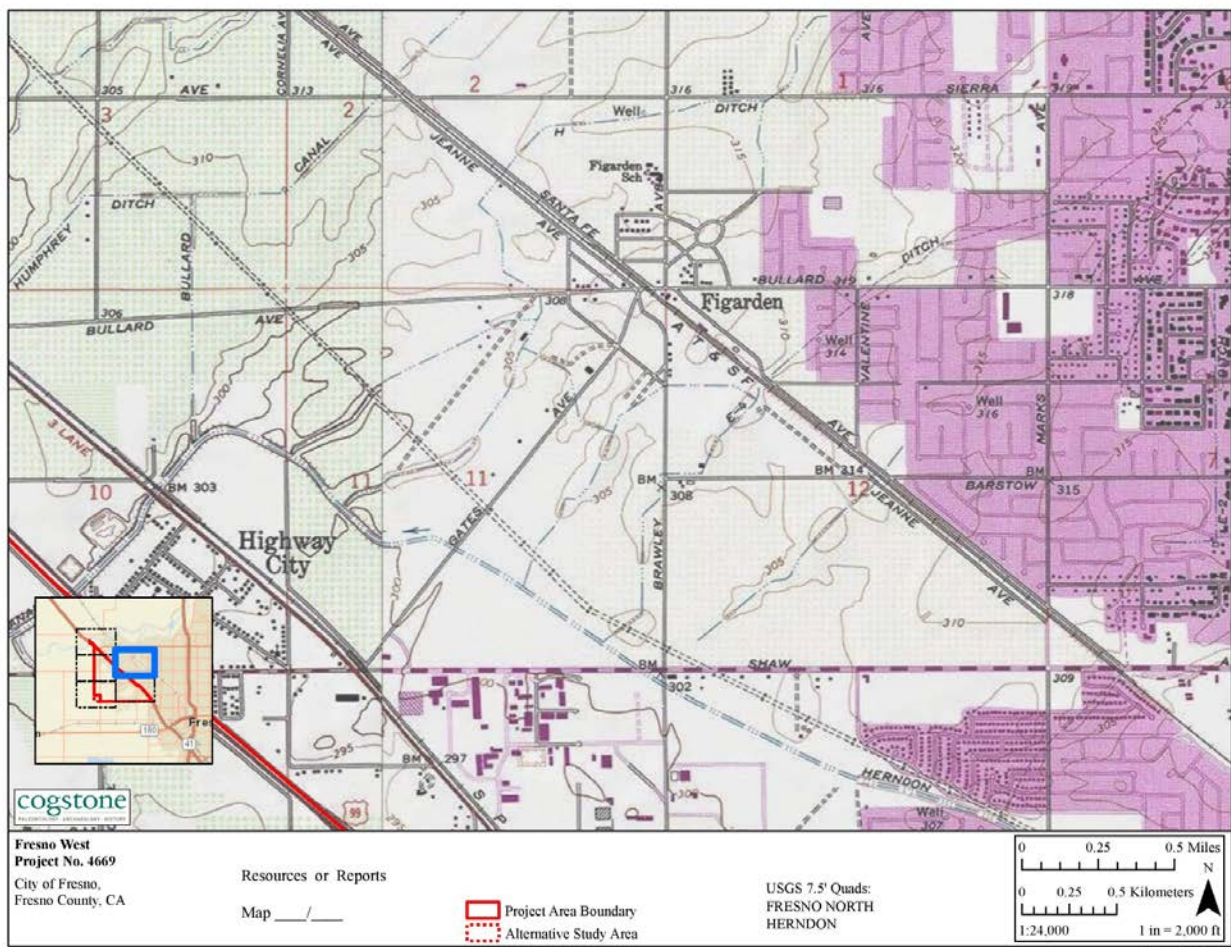
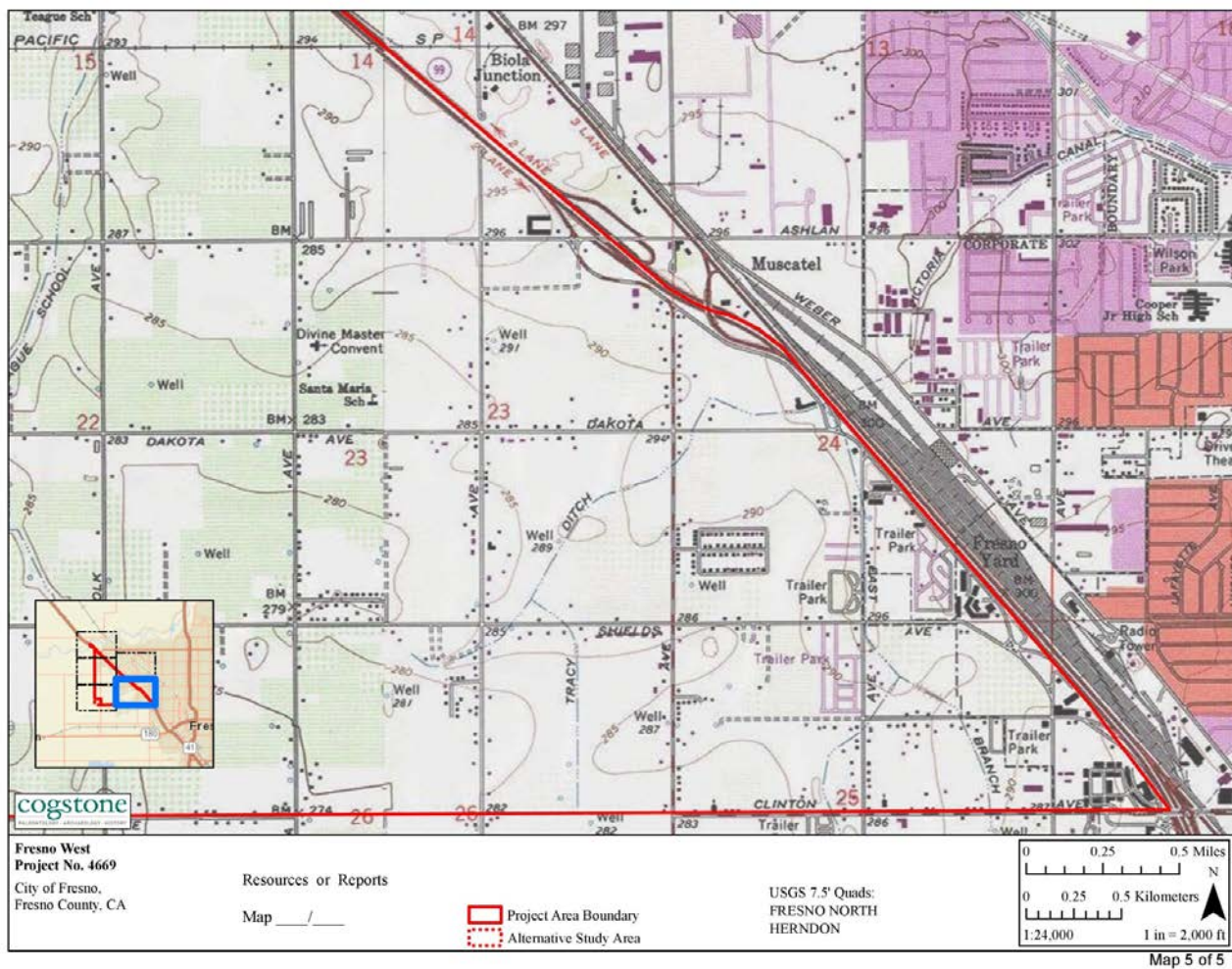


Figure 5. Project location map 4



Map 5 of 5

Figure 6. Project location map 5



TABLE MOUNTAIN RANCHERIA

TRIBAL GOVERNMENT OFFICE

CERTIFIED 3675 4654

August 6, 2019

Leanne Walker-Grant
Tribal Chairperson

Beverly J. Hunter
Tribal Vice-Chairperson

Craig Martinez
Tribal Secretary/Treasurer

Matthew W. Jones
Tribal Council Member

Richard L. Jones
Tribal Council Member

Rodney L. Horton, MPA, Planner III
City of Fresno
Planning and Development Department
2600 Fresno Street, Rm 3065
Fresno, Ca. 93721

RE: CEQA and SB 18 Consultation Request for the Specific Plan of the
West Area, City of Fresno, Fresno County

Dear: Rodney L. Horton

Table Mountain Rancheria is responding to your letter dated, August 19, 2019, regarding, CEQA and SB 18 Consultation Request for the Specific Plan of the West Area, City of Fresno, Fresno County. Thank you for notifying Table Mountain Rancheria of the potential development and request for consultation. The Rancheria is very interested in this project as it lies within our cultural area of interest.

If you have already conducted a record search, please provide Table Mountain Rancheria with copies of any cultural resource report you may have.

At this time, please contact our office at (559) 325-0351 or rpennell@tmr.org to coordinate a discussion and meeting date regarding your project.

Sincerely,

Robert Pennell
Tribal Cultural Resources Director

23736
Sky Harbour Road
Post Office
Box 410
Friant
California
93626
(559) 822-2587
Fax
(559) 822-2693

Molly Valasik

From: Molly Valasik <mvalasik@cogstone.com>
Sent: Monday, October 07, 2019 11:04 AM
To: 'rpennell@tmr.org'
Cc: 'Emily Barton'
Subject: Fresno West Area Specific Plan
Attachments: 19-287 Results Letter.pdf

Hi Mr. Pennell,

The City of Fresno forwarded your August 6, 2019 response regarding the Specific Plan of the West Area, City of Fresno to me. We are currently drafting the cultural resources assessment report for the Specific Plan and will provide you a copy once it is complete.

I have attached the results of the records search conducted by the SSJVIC on July 30, 2019. Results of the record search indicate that 36 previous studies and 82 cultural resources have been previously recorded within the Specific Plan. The cultural resources include four historic archaeological sites and 78 historic built environment resources.

Please let me know if I can provide you with any more information. Thank you.



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APPENDIX D. SENSITIVITY RANKING CRITERIA

PFYC Description	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous or metamorphic and Precambrian or older rocks. Assessment or mitigation of paleontological resources is usually unnecessary.	1
Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils. Includes rock units too young to produce fossils, sediments with significant physical and chemical changes (e.g., diagenetic alteration) and having few to no fossils known. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Potentially Moderate but Undemonstrated Potential. Units exhibit geologic features and preservational conditions that suggest fossils could be present, but no vertebrate fossils or only common types of plant and invertebrate fossils are known. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3b
Moderate Potential. Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and of low abundance. Common invertebrate or plant fossils may be found. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3a
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. If impacts to significant fossils can be anticipated, on-the-ground surveys prior to authorizing the surface disturbing action will usually be necessary. On-site monitoring or spot-checking may be necessary during construction activities.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. On-the-ground surveys prior to authorizing any surface disturbing activities will usually be necessary. On-site monitoring may be necessary during construction activities.	5

**Potential Fossil Yield Classification (PFYC) rankings are as per the Bureau of Land Management (BLM 2016)*

APPENDIX D

Utility Background Summary

TECHNICAL MEMORANDUM

DATE: January 20, 2022

Project No.: 487-60-19-16

SENT VIA: EMAIL

TO: Steve McMurtry, De Novo Planning Group

FROM: Jim Connell, RCE# 63052

REVIEWED BY: Doug Moore, RCE# 58122

SUBJECT: City of Fresno West Area Neighborhood Specific Plan Utility Background Summary



This Technical Memorandum (TM) presents background information on wet utility infrastructure for the City of Fresno's (City) West Area Neighborhood Specific Plan. This TM includes the following sections:

- Potable Water Treatment and Distribution
- Wastewater Collection and Treatment
- Stormwater and Flood Control

The focus of this TM is on the West Area, as shown in Figure 1. However, because the West Area is dependent on the available capacities of potable water, recycled water, sewer, wastewater treatment and the regional flood control systems, overviews of these City-wide systems are also provided. Because there is minimal recycled water infrastructure conveying recycled water to the West Area, the City's recycled water program is discussed as part of the wastewater collection and treatment section.

The City is anticipating considerable growth over its buildout horizon. According to the General Plan developed in 2014 (Dyett & Bhatia, 2014), the City's population is expected to increase from approximately 495,000 in the 2010 Census to approximately 771,000 people by the year 2035 (General Plan Horizon) and 970,000 people by Buildout of the Sphere of Influence (SOI), which is expected after 2035. The City's 2018 West Area Specific Plan Existing Conditions Report estimates the current population of the West Area to be approximately 38,503 people.

The maximum buildout potential allowed under the West Area Neighborhood Specific Plan would allow for the future development of up to 54,953 dwelling units (including 47,072 dwelling units in the residential category, 67 dwelling units in the commercial category, and 7,814 dwelling units in the mixed use category) and approximately 48.8 million square feet of non-residential uses.

Based on the City's General Plan Housing Element estimate of approximately 2.97 persons per dwelling unit, the proposed Specific Plan is estimated to accommodate 163,211 new residents in the City at buildout under the maximum development potential allowed under the Specific Plan. Therefore, the West Area is expected to have a total population of 201,714 people by buildout of the Specific Plan under the

maximum development potential. The 2014 General Plan included the West Area, and thus previous infrastructure evaluations are helpful in determining the future infrastructure needs of the West Area.

POTABLE WATER TREATMENT AND DISTRIBUTION

The potable water facilities are discussed below.

Summary of the Water System

The City's Water Division serves the City and several County islands (unincorporated areas within the City, West Yost, 2014) through nearly 1,800 miles of transmission and distribution pipelines with approximately 133,000 service connections (Provost & Pritchard, 2016). More than 39,100 million gallons of potable water were delivered in 2018 (Fresno, 2019). The City's water supply comes from groundwater wells, surface water treatment facilities, and contracts for surface water supplies from the United States Bureau of Reclamation (USBR) and the Fresno Irrigation District (FID).

The West Area is served by nearly 96 miles of distribution pipelines and just under a mile of recycled water service (in North Cornelia Avenue between West Clinton Avenue and West Shields Avenue). The West Area's potable water system is shown on Figure 2.

In addition to the City's water system, there are four independent water systems located within the City limits, including Bakman Water Company, Pinedale County Water District, California State University Fresno, and Park Van Ness Mutual Water Company. These independent water systems have their own water supplies, and do not receive water from the City, with the exception of a portion of the Pinedale County Water District east of Highway 41 and south of Herndon Avenue.

The City has emergency interties with the City of Clovis and California State University Fresno that provides additional water supply flexibility.

Water Demands and Supplies

In 2016, The City of Fresno adopted its 2015 Urban Water Management Plan (UWMP) (Provost & Pritchard, 2016). This UWMP documented the past, current, and projected future water demands and supplies through 2040, as shown in Table 1. In 2015, the City served approximately 132,844 acre-feet (af) of potable water. The City's water demands are projected to increase to over 301,000 af per year (af/yr) by 2040 (based on the growth in the 2014 General Plan). However, available water supply is also projected to increase to over 366,000 af/yr by 2040. Thus, the City should continue to have a surplus supply in excess of 65,000 af/yr. The West Area is included in the City's water supply and demand projections. Therefore, the City will have enough water to meet the full water demands of the West Area starting in 2020 and continuing beyond 2040.

Table 1. City of Fresno Past and Projected Water Demands, Supplies, and Surpluses, af/yr^(a)						
	Actual 2015	Projected 2020	Projected 2025	Projected 2030	Projected 2035	Projected 2040
Potable Demand	132,844	14,500	229,600	239,700	254,300	262,500
Recycled Water Demand	8,762	21,200	34,400	34,400	38,600	38,600
Total Demands	141,606	235,700	264,000	274,100	292,900	301,100
Groundwater Supply	83,360	130,400	135,100	139,700	44,300	148,900
Surface Water – Fresno Irrigation District (FID) Contract Supply ^(b)	-	106,200	111,200	116,200	121,200	126,200
Surface Water – United States Bureau of Reclamation (USBR) Contract Supply	41,525	52,600	52,600	52,600	52,600	52,600
Recycled Water Supply	8,750	19,500	31,000	33,500	36,000	38,500
Purchased	3,000	-	-	-	-	-
Total Supply	136,635	308,700	329,900	342,000	354,100	366,200
Surplus	(4,971)^(c)	73,000	65,900	67,900	61,200	65,100
<p>(a) Source: City of Fresno 2015 UWMP, Tables 4-3, 4-4, and 4-5 for Demands and Tables 6-7, 6-13, and 6-14 for Supply</p> <p>(b) The quantity of water available to the City of Fresno from FID is not explicitly quantified. On May 25, 1976, the City signed a contract with FID for delivery of the City's pro rata share of FID's water entitlements on the Kings River. The contract specifically excludes any of FID's Class 2 USBR entitlement and any water stored in Pine Flat Reservoir by FID. The Kings River Water Association (KRWA) allocates entitlements to Kings River contractors on a daily basis; these entitlements are allocated among the contractors using a methodology that estimates the flow in the Kings River before construction of Pine Flat Reservoir (i.e., the project). Once KRWA calculates the "pre-project" entitlement, FID has the option of releasing the entire entitlement for downstream diversion or storing a portion of the entitlement within Pine Flat Reservoir for use at a later date.</p> <p>(c) The values provided in the City's 2015 UWMP do not balance exactly for the year 2015.</p>						

Recent groundwater and surface water production is shown in Table 2.

Table 2. Recent Groundwater and Surface Water Production, af/yr^(a)				
Water Source	2016	2017	2018	2019
Groundwater	99,107	105,211	76,796	54,608
Surface Water	13,162	15,869	43,269	60,936
Total	112,269	121,079	120,066	115,544
(a) Some numbers do not add up exactly due to rounding.				

City Groundwater Facilities

Until 2004, groundwater was the sole source of potable water supply for the City. As of 2018, there were approximately 250 operational groundwater wells with a total production of 25,000 million gallons per year (Fresno, 2018). Local groundwater comes from the Kings Sub-basin of the San Joaquin Valley Groundwater Basin. This sub-basin has been classified by the California Department of Water Resources (DWR) as critically over drafted (DWR, 2018), but supplementing supplies with surface water has reduced drawdown. The West Area is served by eight active wells, as summarized in Table 3.

Table 3. Summary of Active City Wells Serving the West Area

Well Number	Pump Horsepower	Rated Capacity gallons per minute ^(a)
Well 104	125	1,500
Well 138	125	1,800
Well 169	200	2,400
Well 171-1	60	600
Well 171-2	150	1,750
Well 192	150	2,000
Well 358 (has backup power)	200	2,100
Well 364	100	1,000
Total Well Pumping Capacity [gpm]		13,150
(a) Pump capacity and backup power information provided by City Staff.		

Groundwater within the Kings Sub-basin generally meets primary and secondary drinking water standards¹ for municipal water use. However, groundwater contamination has caused the City to close over 30 wells and to construct well-head treatment facilities to other wells. Wellhead treatment and blending for 1,2-dibromo-3-chloropropane; ethylene dibromide; 1,2,3-trichloropropane; volatile organic compounds (including trichlorethylene, tetrachloroethylene), nitrate, manganese, radon, chloride, and iron are required in some areas of the City. Nitrates are an important cause of groundwater contamination in the City. Nitrates come primarily from on-site wastewater treatment systems (septic tanks and leach fields) and fertilizer. Water contaminated with nitrate is difficult to treat. A transmission grid main (TGM) system on a half-mile grid decreases water quality variation between wells. While most wells discharge directly to the TGM system, there are some that are treated or blended first to address specific water quality issues. Twelve well sites City-wide have de-aeration facilities where groundwater is pumped to a tank to allow for de-aeration before entering the TGM (West Yost, 2014). **With wellhead treatment and blending, the water supplied by the City meets all the primary and secondary drinking water standards for municipal water use and is safe and healthy to consume.**

The West Area tends to have better ground water quality than the City as a whole (Dyett & Bhatia, 2014), with only a small portion of the West Area (near Highway 99) having nitrates in excess of the allowable limit

¹ EPA has established National Primary Drinking Water Regulations (NPDWRs) that set mandatory water quality standards for drinking water contaminants. These are enforceable standards called "maximum contaminant levels (MCLs) which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL is the maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.

In addition, EPA has established National Secondary Drinking Water Regulations (NSDWRs) that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL. (EPA website, <https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals>, accessed February 21, 2020)

of 45 mg/L as NO₃ or 10 mg/L as NO₃-N. Well 171-2 is the only well that requires treatment within the West Area, and uses granular activated carbon (GAC). The City proposes to construct 15 new wells as needed in the West Area to help meet buildout demand. In addition, nearly 3 miles of distribution pipelines are planned, including expansions to the TGM (West Yost, 2014).

Surface Water Facilities

Historically, about one third of the water supplied to the City comes from surface water from the Kings and San Joaquin river through rain and snow melt from the Sierra Nevada Mountains via the Friant-Kern Canal and the 4.5-mile-long Friant-Kern canal pipeline. Recent expansion of surface water treatment capacity has resulted in a larger share of City water supplies coming from surface water (53 percent in 2019).

Since mid-2004, the City has operated the North East Surface Water Treatment Facility (NESWTF) to treat this water to supplement the City's groundwater supplies. The NESWTF has a rated capacity of 30 million gallons per day (mgd) (Provost & Pritchard, 2016). In 2015, the City brought a new Water Storage and Treatment Facility (T3) online with a capacity of 4 mgd. The T3 was a temporary facility until the Southeast Surface Water Treatment Facility (SESWTF) began full operation in July 2018. The SESWTF has a rated capacity of 54 mgd and receives raw water from the Kings River through the thirteen-mile-long Kings River Pipeline. Expansion of the facility is planned to increase capacity to 80 mgd by 2021 (Fresno, 2019).

The City purchases surface water from the USBR's Central Valley Project (CVP) – Friant Division with an agreement of 60,000 acre-feet of water per year (19,551 million gallons per year). This agreement was renewed in 2010 with no expiration date (Provost & Pritchard, 2016). The surface water is imported to constructed recharge basins and used for "intentional recharge" to the groundwater basin.

In May of 1976 the City of Fresno and FID executed an agreement that stipulated that as land is annexed to the City, the City will receive a pro rata share of FID's Kings River entitlement. The agreement was specific that FID's USBR Class 2 water was excluded and that the City could not store allocated water behind Pine Flat Dam. The pro rata share is based on the area annexed to the City, and within FID's boundaries, as compared to the total area of FID's water service area (Provost & Pritchard, 2016). The historical and projected volume of water available from FID is shown in Table 4, which is copied from the City's 2015 UWMP Table 6-5.

Table 4. Projected Allocation of FID's Kings River Water for City of Fresno in Normal Years^(a)							
Year	2010^(b)	2015^(b)	2020	2025	2030	2035	2040
Projected City Allocation, %	25.41	25.94	27.23	28.51	29.80	31.09	32.37
Projected Water Quantity to City in Normal Year, af/yr	108,200	110,500	116,000	121,500	126,900	132,400	137,900
Actual Allocation for City, af	125,543	42,935	-	-	-	-	-
(a) Source: Table 6-5 from City of Fresno 2015 UWMP. According to communications with City staff in June 2020, the 2016 renegotiated contract with FID limits available allocation 29%, or approximately 123,540 AFY. This allocation limit will be addressed in the City's 2020 UWMP.							
(b) Allocations for 2010 and 2015 were provided by FID. Allocation for all other years is based on interpolation between 2015 and SOI buildout at 2056. With General Plan Update SOI buildout has shifted from 2025 to 2056 as reflected here.							

Recycled (Non-Potable) Water Facilities

Recycled water is wastewater that has been treated to be used again. Even though the treated water is clean, it is not used for potable water (drinking water). The City operates and maintains a recycled water system that disposes of the treated wastewater (called effluent) by using it for agricultural irrigation of non-food crops. The recycled water system is further discussed in the Sewer and Wastewater Treatment Section, below.

Distribution System Facilities

The City's potable water distribution facilities consist of the following components (West Yost, 2014):

- 4 Quasi-Pressure Zones
- 26 SCADA zones
- 4 Water Storage Tanks
- 8 Booster Pump Stations
- 1,740 miles of Transmission and Distribution Pipelines

The City's four quasi-pressure zones were created to control flow from higher elevation to lower elevation areas of the City. The pressure zones are separated by "gates" of closed or partially closed valves that are named after the street alignment they most closely follow: Shepherd Gate, Sierra Gate, and Highway 41 Gate. These quasi-pressure zones help to regulate minimum and maximum system pressures. The entire West Area falls within the Westside quasi-pressure zone.

The distribution system is monitored and controlled through a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system is split into zones within the quasi-pressure zones where it controls the operation of the system. The City operates groundwater wells using an algorithm that calculates the average pressure over SCADA zones and determines which wells will operate based on cost-efficiency. Zones 1 and 5 serve the current West Area. These zones will need to be expanded, or new zones will be needed to cover the area at buildout.

Treated water storage is provided by four tanks, including 1.5 million gallons (MG) at the NESWTF, 3 MG at the intersection of Clovis Avenue and California Avenue (the Southeast Tank), 3MG at South Clovis Avenue near California Avenue (tank T3) and 3MG at the intersection of H Street and San Benito Street in Downtown (tank T4). There are no potable water storage facilities within the West Area.

There are eight booster pump stations (BPSs) located within the water distribution system. These are the NESWTF Tank BPS, SESWTF Tank BPS, Southeast Tank BPS, T3 BPS, T4 BPS, Booster Pump 1 (BP01), Booster Pump 2 (BP02), and Booster Pump 4 (BP04). Booster Pump 3 was budgeted, but never built. BP01 and BP02 boost water from SCADA Zone 8 to Zone 4. BP04 boosts water from Zone 11 to the eastside of Zone 14 through a dedicated 24-inch diameter pipeline and subsequent 12-, 14-, and 16-inch diameter pipelines. The characteristics of each of these pumping facilities are summarized in Table 5.

Table 5. Existing Booster Pump Station Design Characteristics^(a)						
Pump Station	Supply Source/ Location	Rated Capacity, mgd	Pumps Capacity, gpm/Power, Hp			
			Unit 1	Unit 2	Unit 3	Unit 4
NESWTF	NESWTF Tank	40	7,000/400	7,000/400	7,000/400	7,000/400
SESWTF	SESWTF Tank	80	13,889/700	13,889/700	13,889/700	13,889/700
SE BPS	Southeast Tank (T1)	7.2	1,000/50	2,000/100	2,000/100	1,000/50
T3 BPS	T3 Tank (Clovis Inter-tie)	6	2,085/100	2,085/100	-	-
T4 BPS	T4 Tank (H Street)	11	2,500/125	2,500/125	2,500/125	-
BP01	Shepherd/Sierra A	6.9	4,800/125	-	-	-
BP02	Shepherd/Sierra A	3.2	2,200/50	-	-	-
BP04	Highway 41	8.6	6,000/200	-	-	-
(a) Source: City of Fresno Water Master Plan, West Yost 2014 and City 2015 UWMP, Provost and Pritchard 2016, gpm = gallons per minute						

The City has approximately 9.2 million lineal feet (or about 1,740 miles) of water system pipelines. These pipelines generally range from 6 to 48 inches in diameter and are made up of a variety of materials including asbestos-cement, cast iron, concrete, copper, ductile iron, steel and polyvinyl chloride (PVC). Much of the City's potable water distribution system consists of old steel and cast-iron pipe, with over 20 percent of the pipes greater than 50 years old.

Major Water System Issues and Opportunities

Significant issues and opportunities are discussed below:

Future surface water supply for treatment and groundwater recharge is provided through the purchase and utilization of surface water allocations from the USBR at Friant Dam and FID from the Kings River. However, "Water Made Available" under the City's contracts with Reclamation and FID could affect the amount of surface water delivered.

Groundwater contamination has caused the City to close over 30 wells and to construct well-head treatment facilities to other wells. The city is committed to providing a safe water supply to its residents and businesses. It is possible that additional wells will have to be closed, which would reduce the City's water supply and some wells may need treatment facilities to continue to supply water into the distribution system.

More than 15 percent (42 wells out of 270) of the City's wells were constructed prior to 1960 (over 60 years ago) and almost 40 percent (98 of 270) were constructed prior to 1970 (over 50 years ago). It has been recommended that the wells be replaced after 45 to 50 years; thus, about 40 percent of the City's wells are overdue for replacement. Also, mechanical and electrical well component upgrades are required about every 20 to 25 years. Therefore, it is anticipated that significant well installations, replacements and upgrades may be needed to these systems in the near future to maintain existing groundwater supply capacity and meet increased water demands.

One of the greatest challenges facing the City's water distribution system is conveying water from areas of high water production to areas of high water demand. The water production and distribution system

historically has been a distributed system whereby groundwater wells would be constructed on an as-needed basis in the area where the water was needed. This distributed water system does not require large diameter transmission mains to convey water from one portion of the City to another.

SEWER AND WASTEWATER TREATMENT

The City is the sewer agency for the Fresno-Clovis Metropolitan Area (FCMA). The City also owns and operates the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) (Carollo, 2015) and the North Fresno Wastewater Treatment Facility (NRWTF). The City's current sanitary sewer collection system, the RWRF, and the NRWTF are discussed below.

Wastewater is composed of sanitary flow and Infiltration and Inflow (I&I).

- The sanitary flow is the actual wastewater that is generated in the homes and businesses that are connected to the sewer system. The sewer system (or collection system) is intended to collect and convey all the sanitary flow from the homes and businesses to the wastewater treatment plant. The sanitary flow is often called the Average Dry Weather Flow (ADWF) because it is the primary source of wastewater during dry weather.
- I&I is stormwater that enters the wastewater collection system through flooded maintenance holes; defects in pipes, pipe joints, and sewer structures; or as inflow through illicitly connected downspouts, area drains, and catch basins. Sewer systems are intended to prevent (or minimize) the I&I that enters the sewer system so that the stormwater does not cause the sewer capacities to be exceeded or result in treating stormwater at the wastewater treatment plant. The combined ADWF and I&I is called the peak wet weather flow (PWWF).

Collection System

Collection systems are sized, designed, and constructed to convey the PWWF to the City's wastewater treatment plants. The City's wastewater collection system has roughly 23,000 manholes, 15 lift stations, 1.7 force mains, and 1,500 miles of gravity sewer pipes (Carollo, 2015). Generally, the collection system flows from northeast to southwest across the entire City. In the West Area, wastewater generally flows from the north to the south. Clovis has four connections to the City's collection system. Each of these connections have flow meters that measure the flow from the Clovis sewer system into the City's sewer system. The City's collection system in and near the West Area is shown on Figure 3.

Fresno-Clovis Regional Wastewater Reclamation Facility (RWRF)

Wastewater treatment plant capacities are typically rated based on the ADWF flow. The RWRF has an ADWF capacity of 92 mgd (California Regional Water Quality Control Board, 2018), however it can treat the PWWF that occurs during storm events, which is higher than the ADWF but lasts for short duration (Carollo, 2010).

Wastewater from the West Area is treated at the RWRF, which has an average annual flow of approximately 56 mgd (Fresno, 2019). The RWRF receives and treats wastewater from three additional service areas, including: the City of Clovis, Pinedale County Water District, and Pinedale Public Utility District. The City of Clovis owns 9.3 mgd of ADWF capacity, while the remaining capacity belongs to the

City. The RWRF is located at the intersection of Jensen and Cornelia Streets in southwest Fresno and is shown on Figure 3.

The facility includes the following major processes/facilities:

- **Headworks and Grit Chambers** – The screening facilities remove the larger trash and grit from the raw wastewater. From the headworks, the wastewater is pumped into pipes that flow to the primary clarifiers.
- **Primary Clarifiers** – These six tanks allow finer sediment to settle out of the effluent and skim fats, oils and grease from the top. Wastewater leaving the settling tanks is called primary effluent and either flows to the aeration basins or is diverted for additional screening prior to tertiary treatment.
- **Aeration Basins** – In the aeration basins air is pumped into the wastewater to increase the growth of bacteria and other micro-organisms that consume the organic waste. From the aeration basins the partially treated wastewater flows to the Secondary Clarifiers.
- **Secondary Clarifiers** – The secondary clarifiers are basins where the bacteria and micro-organisms settle out of the wastewater. There are 16 secondary clarifiers. Effluent leaving the secondary clarifiers is called secondary effluent, and it flows to storage ponds. There is currently no disinfection system for the secondary effluent.
- **Membrane Bioreactor Tanks** – Primary effluent designated for tertiary treatment is passed through a fine screen and two pre-aeration basins before entering four membrane bioreactor (MBR) tanks. MBRs combine biological treatment with membrane filtration. Effluent leaving the MBRs flows to ultraviolet (UV) disinfection vessels.
- **UV Disinfection** – Effluent from the MBRs is exposed to UV light to inactivate pathogens. There are four in-vessel UV disinfection trains. After disinfection, effluent is called tertiary effluent and is sent to recycled water storage.
- **Storage Ponds** – There are 1,720 acres of storage ponds where the effluent percolates into the groundwater, evaporates, or is pumped for irrigation of non-food crops.
- **Solids Treatment** – The bacteria and micro-organisms that settle out of the wastewater in the clarifiers are called the solids. Flotation thickeners, digesters, and belt filter presses are used to extract liquid from the solids. The liquid is returned to the settling tanks. The remaining solids are then stored in silos to await disposal.

North Fresno Wastewater Treatment Facility

Located in the north east of the City of Fresno, the NFWTF is a tertiary level wastewater treatment facility that treats wastewater from the northern portion of the City. The plant was constructed with sequencing batch reactor (SBR) technology for secondary treatment, cloth media filtration for tertiary treatment, and sodium hypochlorite for disinfection. The plant produces recycled water at a quality that can be used for irrigation of facilities such as golf courses. The permitted capacity of the plant is 0.71 mgd average monthly flow and 1.07 mgd maximum daily flow. Treatment processes include a sequencing batch reactor for secondary treatment, cloth media filtration for tertiary treatment and sodium hypochlorite for disinfection. The tertiary treated wastewater is currently used for landscaping irrigation (Carollo 2010). Although the NFWTF does not serve the West Area directly, it contributes to the City's total wastewater treatment capacity.

Effluent Disposal and the Recycled Water System

The RWRF includes preliminary, primary, secondary, and tertiary treatment units with disinfection. Secondary treatment consists of three treatment trains with an annual average capacity of 87 mgd, consisting of 30 mgd for Train A and 57 mgd for Trains B and C combined. In 2017, a 5-mgd tertiary treatment system — the Tertiary Treatment and Disinfection Facility — was completed. The system can be expanded to 15 mgd and ultimately to 30 mgd (Water Systems Consulting Inc., 2021).

The City has three primary means of effluent disposal:

1. Undisinfected secondary effluent to on-site and off-site farmland for restricted irrigation
2. Undisinfected secondary effluent to percolation ponds
3. Disinfected tertiary effluent to the recycled water distribution system

The percolated effluent has been deemed equivalent to Title 22 tertiary treated water by the State Water Resources Control Board Division of Drinking Water (DDW). The City has been extracting this water for reuse in areas within and surrounding the RWRF, as well as to FID's canals, through an exchange agreement for delivery to FID agricultural customers.

The discharged effluent is disposed within the City boundaries and just southwest of the metropolitan area. The treated effluent percolation ponds are within the City's SOI and hydrologic sphere that benefit the City's overall regional water budget.

In addition to the RWRF the NFWTF serves the residential and commercial development and golf course in a portion of northeast Fresno. Since the treatment includes filtration and disinfection producing water quality that meets Title 22 tertiary criteria, it is suitable for additional future uses such as landscape irrigation, freeway irrigation, and many industrial water reuse opportunities.

Future Wastewater Flow and Effluent Disposal

The City has the capacity to produce more recycled water than it can currently use. The City will continue to expand the recycled water delivery system. The City's most recent Collection System Master Plan (Carollo, 2015) was based on land uses from the City's 2014 General Plan. At General Plan build-out, the City will encompass approximately 156.6 square miles and is projected to generate 202.4 mgd of future PWWF.

Sewer Collection System and WWTP Issues and Opportunities

Sewer Collection System and WWTP Issues and Opportunities are discussed below:

At build out, the City's wastewater flows are expected to increase substantially. As such, there are some areas of the existing collection system that cannot convey the build out PWWF within the established maximum flow to full flow (q/Q) ratio of 1.15. There are several localized driven improvements needed in the Downtown area (C-1 through C-7), and an additional upsizing for the pipeline along the City's southern border that feeds the RWRF (C-8, C-10).

Four development driven projects (D-26A, D-26B, D-27A, D-27B) are identified within or along the borders of the West Area. Approximately 3.6 miles of public and privately-owned (i.e., homeowner's responsibility) sewer system drainage lines are proposed to serve the West Area at buildout. The City does not currently collect supervisory control and data acquisition (SCADA) data for their lift stations. Were feasible, Collection System Master Plan (Carollo, 2015) recommends that upgrades be performed to allow for proper flow monitoring data acquisition, which will help confirm lift station capacity and monitor lift station performance.

Additional agricultural or urban water reuse in the future is a possibility with additional distribution and/or treatment facilities. The RWRF currently delivers approximately 4,700 AFY (Water Systems Consulting Inc., 2021) of undisinfected secondary effluent to growers of non-food crops within the City. An additional 1,400 acres could be served with an expansion of the conveyance system or the establishment of an exchange agreement with FID. Within the West Area, approximately 6.3 miles of new recycled water distribution pipelines are planned to be constructed by buildout.

The 2010 Recycled Water Master Plan outlines three locations for potential regional recharge areas. Also referenced as a "super recharge basin", one of the regional recharge areas is located partially within the West Area. If the basins are constructed, a portion of the recharge water could be made up of recycled water, provided there is at least 6 months travel time from the super recharge basin to the nearest drinking water well (Carollo, 2010).

STORMWATER AND FLOOD CONTROL

The stormwater and flood control systems are discussed below.

General Description and Summary of the Storm Drain System

The Fresno Metropolitan Flood Control District (FMFCD) has primary responsibility for managing the local stormwater flows for the City, as well as a large area beyond the City's boundaries. The City's stormwater drains to urban stormwater basins, where it is retained for groundwater recharge or pumped to local irrigation canals owned by Fresno Irrigation District (FID) and then conveyed away from the municipal area.

The City of Fresno is located in the alluvial fans of numerous foothill streams and creeks that drain the western slope of the Sierra Nevada foothills. These streams include Big Dry Creek, Alluvial Drain, Pup Creek, Dog Creek, Redbank Creek, Mud Creek, and Fancher Creek. The City has hot dry summers and cool mild winters, with temperatures of mid-90°F in the summer and 60°F in the winter. The precipitation averages 11 inches per year (FMFCD, 2019) and occurs almost entirely in the fall, winter, and spring.

Regionally, the City is protected by the U.S. Army Corps of Engineers' (Corps) Redbank-Fancher Creeks Flood Control Project. This project includes dams, detention basins, and levees designed to control upstream flood flows to approximately the 200-year storm event. Major facilities of this project include levee systems, the Big Dry Creek, Fancher Creek, and Redbank Creek dams and reservoirs, and the Alluvial Drain, Redbank Creek, Pup Creek, Fancher Creek, Big Dry Creek, Pup Creek Enterprise, and Dry Creek Extension detention basins.

Locally, the District's drainage system consists of approximately 680 miles of pipeline and more than 150 stormwater retention basins. The storm drainage pipeline system is designed to accept the peak flow rate of runoff from a two-year intensity storm event (a storm that has a 50 percent probability of occurring in any given year). When storm events occur that exceed the two-year intensity, ponding begins to occur in the streets until the pipeline system can remove the water. In the event of larger storms, "major storm breakover", the District has planned for streets or other conveyance to move the excess runoff to the basins (FMFCD, 2019).

The drainage system discharges to a system of irrigation canals, creeks, and the San Joaquin River, but is designed to retain and infiltrate as much runoff as possible into the underlying groundwater aquifer. The local drainage service area is subdivided into over 160 drainage areas, most of which drain to a retention basin. Drainage channels within the West Area include:

- East Branch Victoria Canal
- Epstein Canal
- Herndon Canal
- Minor Thornton Ditch
- Silvia Ditch
- Teague School Canal
- Tracy Ditch
- West Branch Victoria Canal
- Wheaton Ditch
- Austin Ditch

The West Area is drained by 15 drainage watersheds, six of which are fully within the West Area, and nine of which drain to areas immediately south or west of the West Area. There are seven existing retention basins within the West Area and an additional five that serve the West Area. An additional basin is planned to serve the drainage shed in the far southwestern corner of the West Area. The West Area's storm drain system is shown on Figure 4.

Floodplain Mapping

Flood Hazards in the City are described in the Federal Emergency Management Agency (FEMA)'s January 20, 2016 Flood Insurance Study but are largely based on hydraulic modeling performed in 1981 (FEMA, 2016). Although the West Area's northern boundary is very near the San Joaquin River, the area is not within a Special Flood Hazard Area. Local flooding can occur for events larger than a 2-year event, but runoff is generally contained in the streets or other breakover easements. Such flooding is not reflected on FEMA's maps.

Improvements to storm drainage facilities are accomplished either as a part of privately funded on-site developments or as a part of the master plan, funded by drainage fees. FMFCD maintains an on-going update to the system hydraulic model for flood control and prepares a capital improvement plan update every 5 years.

Climate Change

Climate change is likely to increase the volume, frequency, and intensity of events in the future in the Central Valley (DWR, 2017).

Stormwater and Flood Control Issues and Opportunities

Stormwater and Flood Control Issues and Opportunities are discussed below.

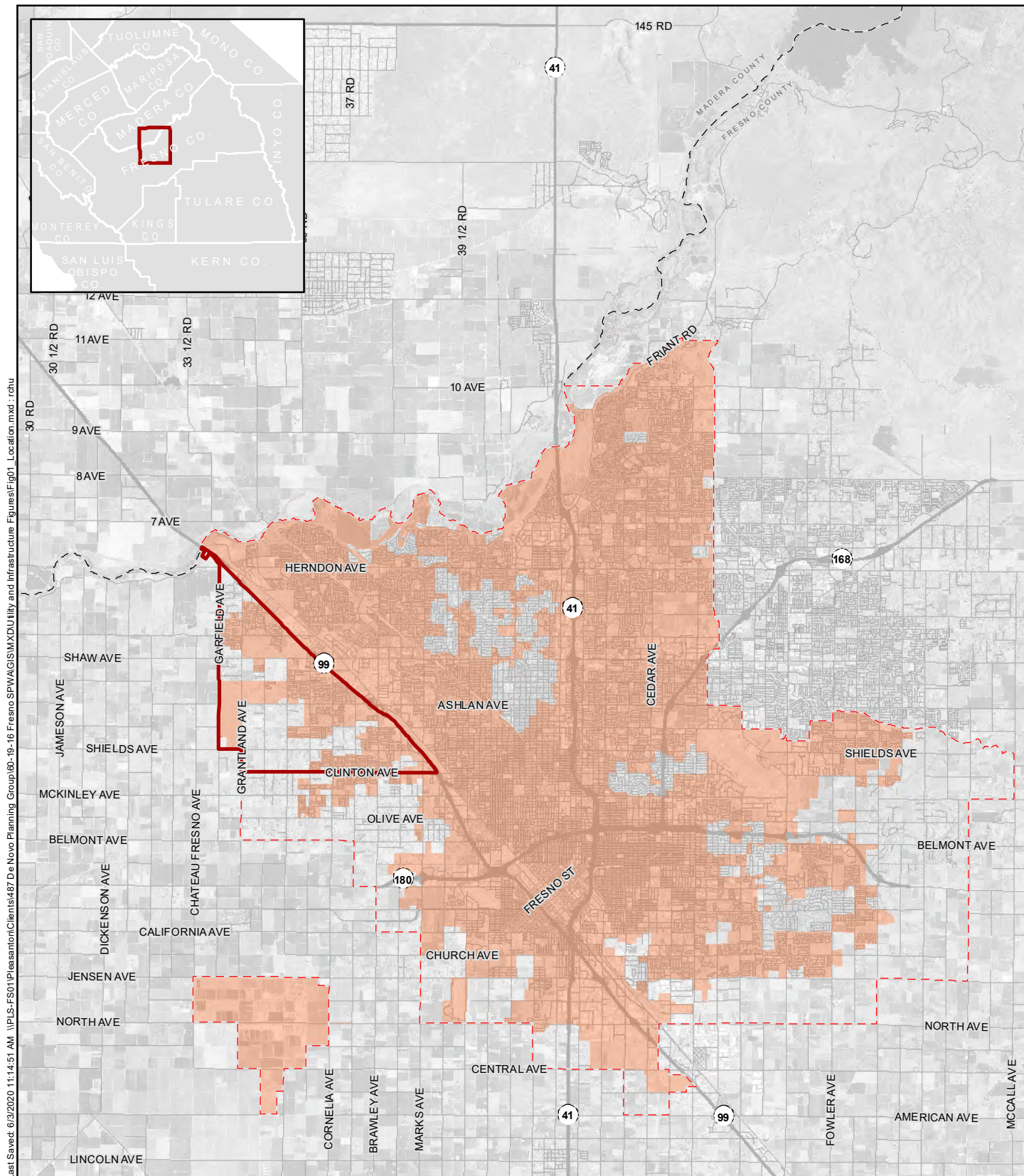
Stormwater represents a water supply opportunity that the City is currently leveraging with its extensive recharge basin system. Infiltration of captured stormwater allows groundwater to be recharged, improves overall water quality, and reduces the need for additional other water supplies.

Since the system is designed to handle approximately a two-year event within the underground drainage system, a significant amount of drainage is conveyed in the streets or through “major storm breakover” conveyances to detention/retention flood basins. This tends to result in shallow flooding over significant areas during larger events, but coupled with large regional flood control projects, the system can handle up to a 200-year, 30-day event.

There is significant storm drainage infrastructure remaining to be constructed to serve the West Area. About 32 miles of additional drainage pipelines is anticipated to be constructed to meet buildout needs.

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Symbology

- Fresno West Area Boundary
- Fresno City Limits
- Sphere of Influence
- County Line

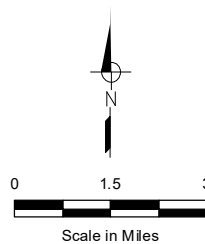





Figure 1
Location Map
Fresno SPWA









CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

Figure 2 Water Facilities




LEGEND

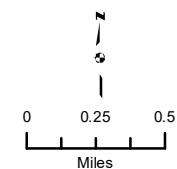
-  Specific Plan of the West Area Boundary
-  Fresno City Limits
-  Fresno Sphere of Influence (SOI)

Existing Water Facilities

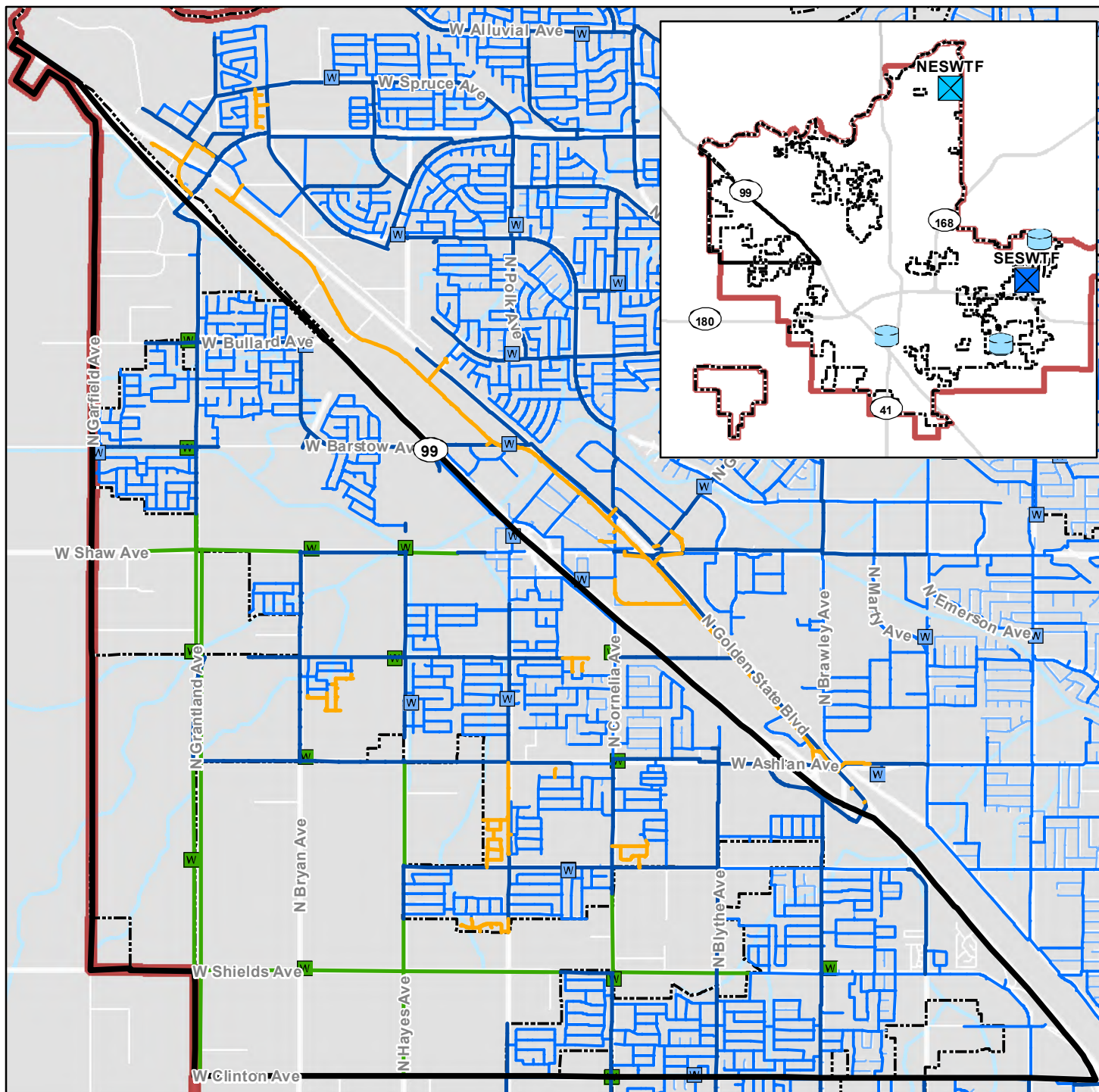
-  Well
-  Tank
-  ≤ 6" Diameter Pipe
-  8" - 12" Diameter Pipe
-  > 12" Diameter Pipe
-  Abandoned Pipe
-  Northeast Surface Water Treatment Facility
-  Southeast Surface Water Treatment Facility

Future Water Facilities

-  Near-term Pipe Improvements
-  Transmission Main (2010 MP)
-  Future Well (2010 MP)

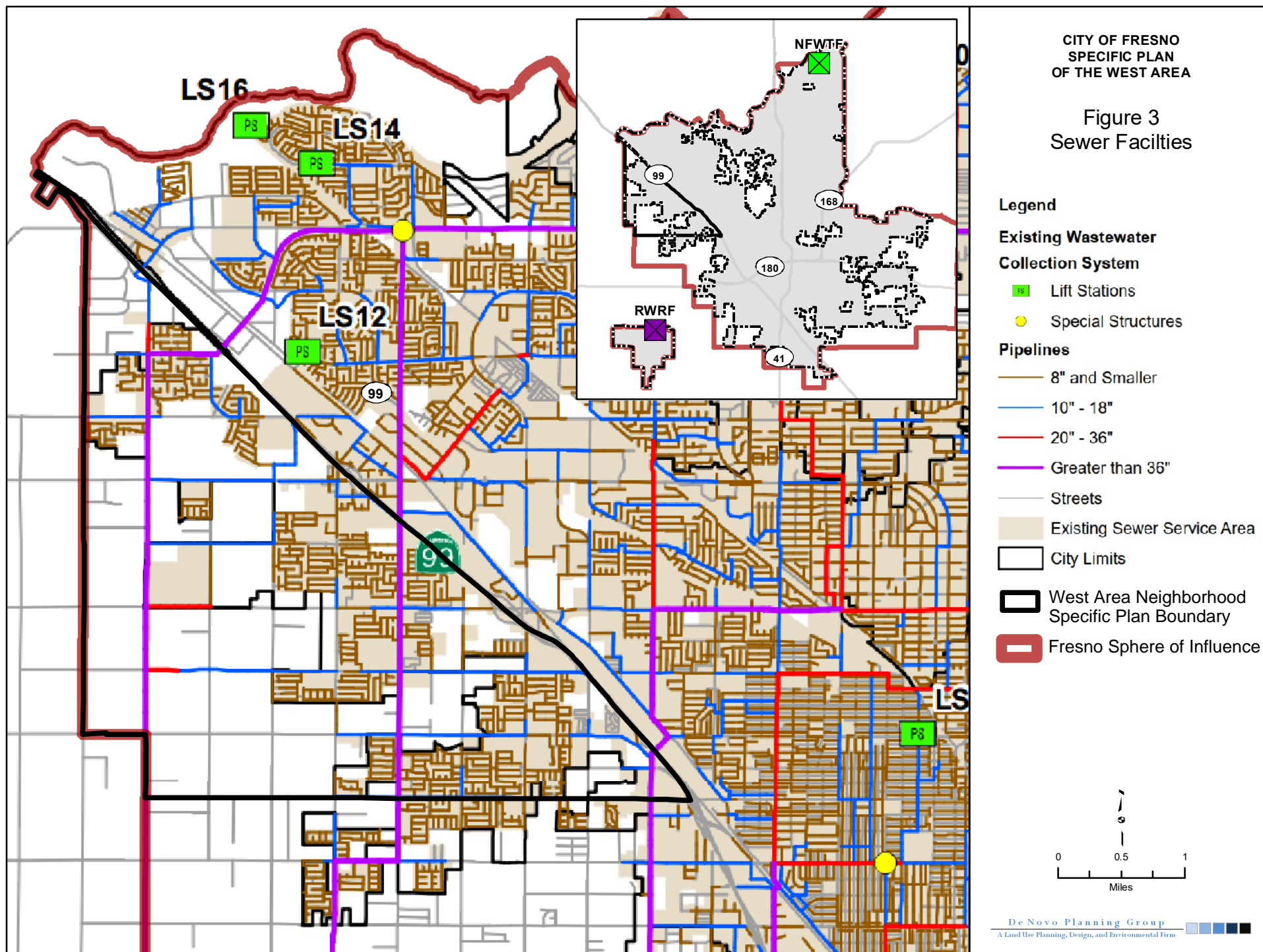


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CITY OF FRESNO
SPECIFIC PLAN
OF THE WEST AREA

Figure 3
Sewer Facilities

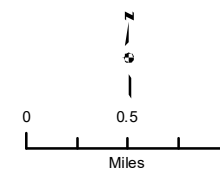


CITY OF FRESNO SPECIFIC PLAN OF THE WEST AREA

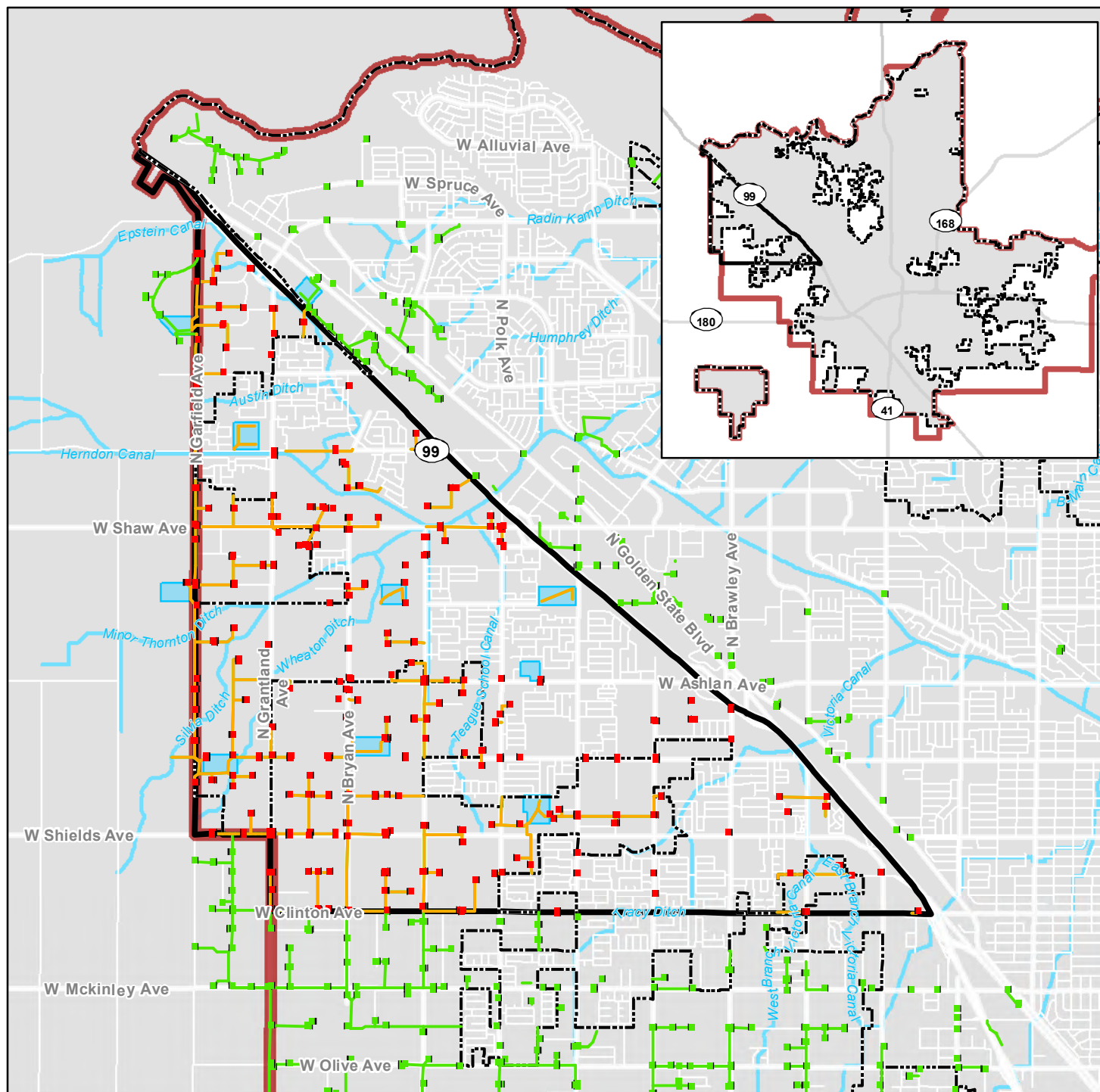
Figure 4 Storm Facilities

LEGEND

-  Waterway
-  Specific Plan of the West Area Boundary
-  Fresno City Limits
-  Fresno Sphere of Influence (SOI)
-  Stormwater Basin
-  Future Inlet Inside West Area
-  Future Inlet Outside West Area
-  Future Pipe Inside West Area
-  Future Pipe Outside West Area



De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



APPENDIX E

Water Supply Assessment

West Area Neighborhood Specific Plan Water Supply Assessment

PREPARED FOR

City of Fresno



PREPARED BY



West Area Neighborhood Specific Plan Water Supply Assessment

Prepared for

City of Fresno

Project No. 487-60-19-16

Project Manager: Chris P. O'Connor, PE

Date

QA/QC Review: Elizabeth T. Drayer, PE

Date

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LIST OF ACRONYMS AND ABBREVIATIONS

af/yr	Acre-Feet Per Year
CASGEM	California Statewide Groundwater Elevation Monitoring
CEQA	California Environmental Quality Act
City	City of Fresno
CVP	Central Valley Project
DWR	Department of Water Resources
EIR	Environmental Impact Report
ET _o	Evapotranspiration
FARGMP	Fresno Area Regional Groundwater Management Plan
FID	Fresno Irrigation District
FMFCD	Fresno Metropolitan Flood Control District
GSP	Groundwater Sustainability Plan
mgd	Million Gallons Per Day
NESWTF	Northeast Surface Water Treatment Facility
NFWRF	North Fresno Wastewater Reclamation Facility
NKGSA	North Kings Groundwater Sustainability Agency
Proposed Project	Proposed West Area Neighborhood Specific Plan
RWRF	Fresno/Clovis Regional Wastewater Reclamation Facility
SB 221	Senate Bill 221
SB 610	Senate Bill 610
SESWTF	Southeast Surface Water Treatment Facility
SGMA	Sustainable Groundwater Management Act
SOI	Sphere of Influence
SWRCB	State Water Resources Control Board
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan

West Area Neighborhood Specific Plan

Water Supply Assessment

EXECUTIVE SUMMARY

Purpose of Water Supply Assessment

The purpose of this Water Supply Assessment (WSA) is to perform the evaluation required by California Water Code sections 10910 through 10915, as established by Senate Bill 610 (SB 610), in connection with the City of Fresno's (City) proposed West Area Neighborhood Specific Plan (Proposed Project), and to support the Environmental Impact Report (EIR) being prepared for the Proposed Project. This WSA evaluates the adequacy of the City's total projected water supplies, including existing water supplies and future planned water supplies, to meet the City's existing and projected future water demands, including those future water demands associated with the Proposed Project, under all hydrologic conditions (Normal Years, Single Dry Years, and Multiple Dry Years).

Proposed Project Overview

The Proposed Project is a Specific Plan that includes residential land use at various densities, commercial areas, various public facilities, parks, and light industrial land uses. The Proposed Project area encompasses approximately 7,077 acres within the City of Fresno's Sphere of Influence (SOI) and resides partially within the City Limits. The Proposed Project is located west of State Route 99. It is bounded on the south by West Clinton Avenue and to the west by Grantland and Garfield Avenues. The northern boundary of the Proposed Project is also south of the San Joaquin River.

The Proposed Project meets the definition of a "Project" per California Water Code sections 10910 through 10915, as established by SB 610 in 2001, thus requiring the preparation of this WSA (see Section 3.1 below).

Water Demands and Supply Availability

Projected water demands for buildout of the Proposed Project total approximately 29,419 acre-feet per year (af/yr). This projected water demand is 2,448 af/yr more than the water demand projected for the Plan Area under the General Plan land use. The water demand for the land use documented in the General Plan was included in the City's 2020 Urban Water Management Plan (UWMP) as part of the general projections for future population and water demand growth.

It is anticipated that the Proposed Project, if approved by the City, would be served from the City's existing and future portfolio of water supplies. The City currently receives water from four water supply sources:

- Surface water that is delivered to the city by two separate sources:
 - Fresno Irrigation District (FID) Agreement for Kings River water.
 - United States Bureau of Reclamation (USBR) Central Valley Project (CVP) Friant Division Contract for San Joaquin River water.
- Groundwater that is pumped from groundwater wells located within the City.
- Recycled water that is treated at the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) and North Fresno Wastewater Reclamation Facility (NFWRF). This water is planned to be used for non-potable uses.

The City has always met system water demand, regardless of regional hydrology. The City expects reductions from normal-year supply during single or multiple dry years but is still projected to meet demands. In the event of a water shortage, the City would implement demand reduction measures as outlined in its Water Shortage Contingency Plan, which would apply to all customers, including those within the Proposed Project area. The projected available water supplies and water demands (including the Proposed Project) through 2045 are shown in Table ES-1. As shown in Table ES-1, available water supplies are more than sufficient to meet the projected water demands for the next 20 years.

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this Water Supply Assessment, this Water Supply Assessment demonstrates that the City's existing and additional planned future water supplies are sufficient to meet the City's existing and projected future water demands, including those future water demands associated with the Proposed Project, to the year 2045 under all hydrologic conditions (including Normal Years, Single Dry Years, and Multiple Dry Years).

Table ES-1. City of Fresno Water Demand Versus Water Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years, af/yr						
Hydrologic Condition		2025	2030	2035	2040	2045
Normal Year^(a)						
Available Water Supply		329,030	341,140	346,610	352,000	357,330
Total Water Demand		199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)		129,826	128,384	124,300	120,124	115,883
Percent Shortfall of Demand		-	-	-	-	-
Single Dry Year^(b)						
Available Water Supply		189,852	195,392	200,862	206,252	211,582
Total Water Demand		164,092	176,132	184,174	192,228	200,287
Potential Surplus (Deficit)		25,760	19,260	16,688	14,024	11,295
Percent Shortfall of Demand		-	-	-	-	-
Multiple Dry Years^(c)						
Multiple Dry Year 1	Available Water Supply	273,725	279,265	284,735	290,125	295,455
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	74,521	66,509	62,425	58,249	54,008
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 2	Available Water Supply	274,626	280,166	285,636	291,026	296,356
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	75,422	67,410	63,326	59,150	54,909
	Percent Shortfall of Demand	-	-	-	-	-

Table ES-1. City of Fresno Water Demand Versus Water Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years, af/yr						
Hydrologic Condition		2025	2030	2035	2040	2045
Multiple Dry Year 3	Available Water Supply	217,568	223,108	228,578	233,968	239,298
	Total Water Demand	190,267	193,637	197,736	201,753	205,708
	Potential Surplus (Deficit)	27,301	29,471	30,842	32,215	33,590
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 4	Available Water Supply	189,852	195,392	200,862	206,252	211,582
	Total Water Demand	162,551	165,920	170,020	174,036	177,992
	Potential Surplus (Deficit)	27,301	29,472	30,842	32,216	33,590
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 5	Available Water Supply	314,840	320,380	325,850	331,240	336,570
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	115,636	107,624	103,540	99,364	95,123
	Percent Shortfall of Demand	-	-	-	-	-
(a) From the City of Fresno 2020 UWMP, Table 7-1. (b) From the City of Fresno 2020 UWMP, Table 7-2. (c) From the City of Fresno 2020 UWMP, Table 7-3.						

Water Supply Assessment Approval Process

The Fresno City Council must approve this WSA at a regular or special meeting. Furthermore, the City must include this WSA in the Draft EIR that is being prepared for the Proposed Project.

In addition, SB 221 applies to residential subdivisions of over 500 dwelling units and requires that the water supplier provide a written verification that the water supply for the project is sufficient, prior to issuance of the final permits. Because the Proposed Project includes up to 83,129 residential dwelling units, it is subject to the requirements of SB 221 (Government Code section 66473.7).

1.0 INTRODUCTION

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 were companion measures which sought to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

SB 610 amended California Water Code sections 10910 through 10915 (inclusive) to require land use led agencies to:

- Identify any public water purveyor that may supply water for a proposed development project; and
- Request a WSA from the identified water purveyor.

The purpose of the WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the proposed project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA.

1.2 Need for and Purpose of Water Supply Assessment

The purpose of this WSA is to perform the evaluation required by Water Code sections 10910 through 10915 in connection with the City's Proposed Project. It is not to reserve water, or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable City policies and procedures, consistent with existing law.

1.3 Water Supply Assessment Preparation, Format and Organization

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. The WSA includes the following sections:

- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required Determinations
- Section 4: City of Fresno Water Service Area
- Section 5: City of Fresno Water Demands
- Section 6: City of Fresno Water Supplies

- Section 7: Determination of Water Supply Sufficiency Based on the Requirements of SB 610
- Section 8: Water Supply Assessment Approval Process
- Section 9: References

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Proposed Project Location

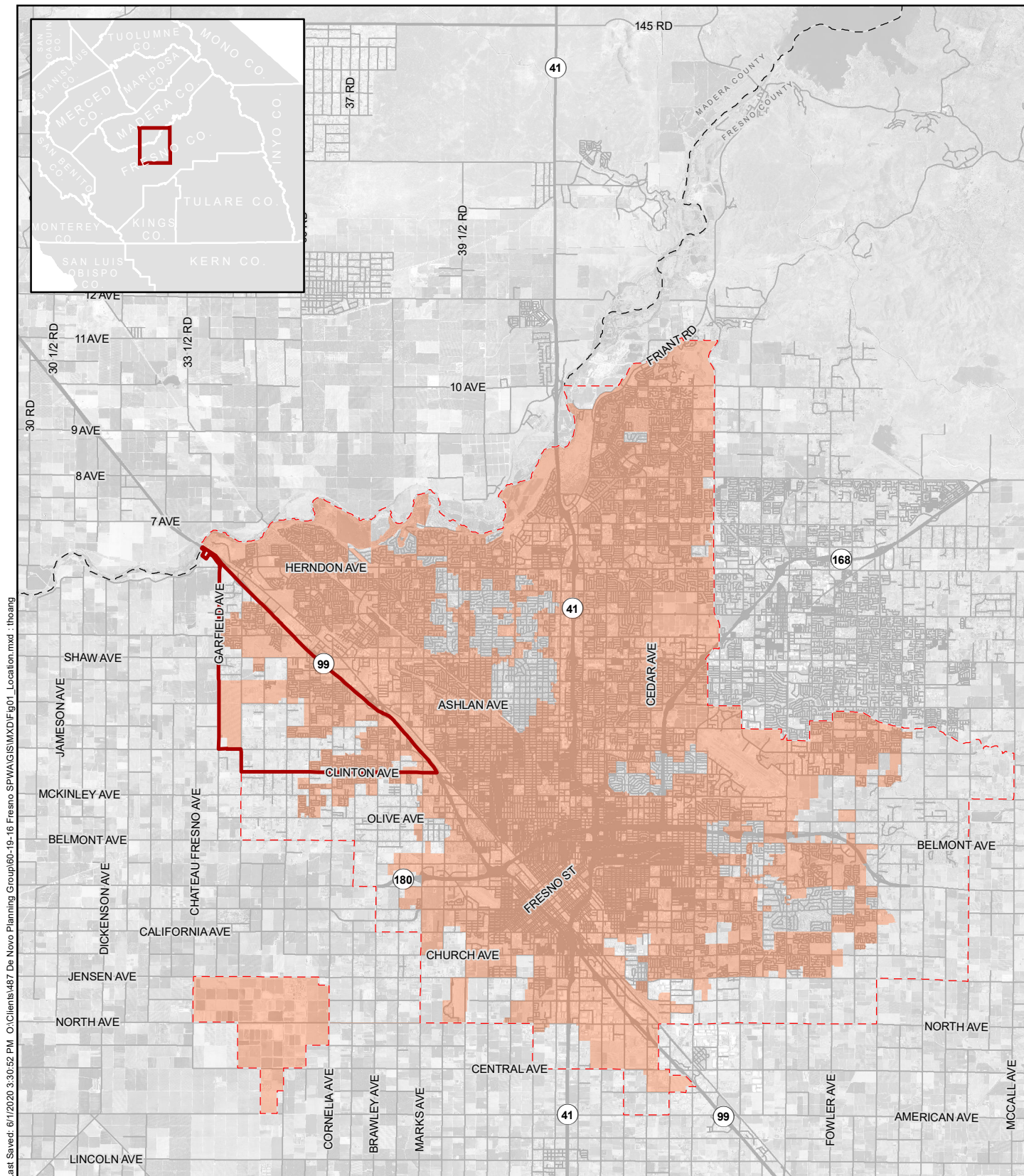
The Proposed Project is located within the City's SOI and partially within the City Limits. The Proposed Project area encompasses approximately 7,077 acres of land, with approximately 63 percent residing within the City Limits. The Proposed Project is located west of State Route 99. It is bounded on the south by West Clinton Avenue, and to the west by Grantland and Garfield Avenues. The Plan Area includes the southwest portion of the unincorporated community of Highway City adjacent to State Route 99. The Proposed Project is also south of the San Joaquin River. Figure 2-1 depicts the vicinity of the Proposed Project.

Currently, the Proposed Project area consists of both Urban and Built-Up land, farmland, or rural residential lots. The Proposed Project has approximately 3,070 acres of Urban and Built-Up land, 286 acres of Farmland of Statewide Importance, 509 acres of Unique Farmland, 1,563 acres of Farmland of Local Importance, and 1,650 acres of Vacant or Disturbed land and Rural Residential land in the Plan Area (De Novo, 2024).

The Proposed Project seeks to provide for the orderly and consistent development that promotes and establishes the West Area as a complete neighborhood with enhanced transportation infrastructure, development of core commercial centers, creation of additional parkland, and encouraging the development of a diverse housing stock (De Novo, 2024). To fulfill this objective the Proposed Project will develop the Plan area for a wide variety of land uses including residential, commercial, office space, parks, and public facilities, as well as the required transportation and utility improvements.

2.2 Proposed Land Uses and Unit Factors

The Proposed Project land use plan utilizes the City's existing 2014 General Plan (Dyett & Bhatia 2014) land use designations to maintain or re-designate some parcels in the West Area. However, the land uses in the General Plan do not have assigned water demand factors. To remedy this, land uses from the General Plan were matched to the City's 2014 Water Master Plan (West Yost, 2014) land uses, which have water demand factors, as shown in Table 2-1. These water use factors were derived from existing water consumption by existing land use in the 2007 Metropolitan Water Resources Management Plan Update Phase 1 Baseline System Characterization (West Yost, 2007). The 2025 unit water demand factors were selected for the calculation of water demands, because they are more representative of future demands than the other unit factors from the Master Plan.



Symbology

- Fresno West Area Boundary
- Fresno City Limits
- Sphere of Influence
- County Line

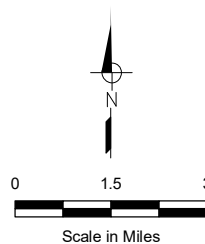


Figure 2-1
Location Map

Fresno West Area
Neighborhood Specific
Plan

Table 2-1. Land Use and Unit Factors for the Proposed Project

General Plan Land Use Designation ^(a)	Water Master Plan Land Use ^(b)	Water Master Plan 2025 Unit Factor, af/ac/yr ^(b)
Low, Medium Low, and Medium	Single Family Residential	3.2
Medium High, Urban Neighborhood, and High	Multi-Family Residential	6.2
Mixed Use	Mixed Use ^(c, d)	20.5
Office, Business Park, and Public Facilities	Commercial/Institutional	1.9
Light Industrial	Industrial	1.9
Pocket Park, Neighborhood Park, Community Park, and Regional Park	Landscape Irrigation	2.9
Open Space and Ponding Basin	Open Space ^(e)	-

(a) From Notice of Preparation for the Specific Plan of the West Area (De Novo, 2019).

(b) City of Fresno 2014 Water Master Plan, Table 3-5.

(c) Mixed Use land use includes both Multi-Family Residential and Commercial/Industrial Land Uses to account for multiple levels of development.

(d) The Multi-Family Residential component of the Mixed Use unit factor was increased due to significant changes in the residential density rates since the 2014 Water Master Plan. The unit factor was scaled up using average density rates from the 2014 Water Master Plan for multi-family residential development (25 dwelling units/acre) and the Proposed Project mixed use development (75 dwelling units/acre). This resulted in the Multi-Family Residential component of the mixed use unit factor being three times higher than that of the 2014 Water Master Plan multi-family residential unit factor (i.e., 18.6 af/ac/yr). The Commercial/Institutional unit factor of 1.9 af/ac/yr was then added to represent the unit factor for the proposed Mixed Use land use (18.6 af/ac/yr + 1.9 af/ac/yr = 20.5 af/ac/yr).

(e) Open Space does not have a water demands so it does not have a unit demand factor.

2.3 Projected Water Demand

2.3.1 Acreage and Assumptions

The Proposed Project will be a mixed-use development that will include various densities of residential units, commercial areas, various public facilities, parks, and light industrial land uses. The Proposed Project will include up to 83,129 Residential and Mixed-Use dwelling units, 256.5 acres of Commercial, 160.2 acres of Employment, up to 456.1 acres of Mixed-Use, 357.8 acres of Open Space, and 397.3 acres of Public Facilities. The Proposed Project land use differs from the General Plan land use for the Plan Area and is shown in detail in Table 2-2. For Mixed Use, it was assumed for both the General Plan and Proposed Project that the area was both Multi-Family Residential and Commercial to provide a conservative estimate of water demands.

Losses were assumed to be 8 percent of total water deliveries, based on raw and potable water use data from the City's 2020 UWMP (UWMP, 2020).

Land uses and water demands for the Plan Area under the General Plan and for the Proposed Project are summarized in Table 2-2. The proposed land uses for the Plan Area under Proposed Project are shown in Figure 2-2¹.

¹ Source: Recirculated Draft Environmental Impact Report – West Area Neighborhoods Specific Plan Figure 2.06, De Novo Planning Group 2024

2.3.2 Water Demand Calculations

Based on the water use factors described above, the projected water demand at buildout of the Proposed Project is shown in Table 2-2. The total water demand for the Proposed Project at buildout is projected to be approximately 29,419 af/yr. The Proposed Project is projected to use 2,448 af/yr more than the water demand projected using General Plan land uses for the Plan Area.

Table 2-2. Land Uses and Projected Demands for the Proposed Project				
Land Use	General Plan, Acres^(a,b)	General Plan Demand ac/yr^(c)	Specific Plan, acres^(a,b)	Specific Plan Demand, ac/yr^(c)
Low	816.7	2,613.6	508.0	1,625.7
Medium Low	855.4	2,737.3	1,381.5	4,420.6
Medium	2,398.2	7,674.2	2,082.3	6,663.4
Medium High	339.7	2,105.8	300.8	1,865.2
Urban Neighborhood	395.1	2,449.6	168.6	1,045.1
High	56.0	347.1	27.4	169.8
Subtotal - Residential	4,861.1	17,927.6	4,468.6	15,789.8
Community	119.3	226.7	55.1	104.8
Recreation	41.3	78.5	41.3	78.5
General	143.2	272.1	155.8	296.1
Regional	0.0	0.0	4.2	8.1
Subtotal - Commercial	303.9	577.3	256.5	487.5
Office	7.5	14.3	52.5	99.7
Business Park	77.1	146.5	75.0	142.4
Light Industrial	33.1	0.0	32.7	0.0
Subtotal - Employment	117.8	160.8	160.2	242.1
Neighborhood	0.0	0.0	225.3	4,617.6
Corridor/Center	106.3	2,179.6	216.0	4,427.4
Regional	144.6	2,964.7	14.9	305.2
Subtotal - Mixed Use	250.9	5,144.3	456.1	9,350.2
Open Space - Park	2.5	7.1	9.0	26.0
Neighborhood Park	88.1	255.4	76.9	223.0
Community Park	38.2	110.8	66.3	192.3
Easement	0.0	0.0	18.9	0.0
Open Space	5.0	0.0	62.3	0.0
Ponding Basin	97.7	0.0	124.5	0.0
Subtotal - Open Space	231.4	373.3	357.8	441.3

Table 2-2. Land Uses and Projected Demands for the Proposed Project

Land Use	General Plan, Acres ^(a,b)	General Plan Demand ac/yr ^(c)	Specific Plan, acres ^(a,b)	Specific Plan Demand, ac/yr ^(c)
Public Facility	21.8	41.4	22.9	43.4
Church	11.6	22.0	68.6	130.3
Special School	18.4	34.9	18.4	34.9
Elementary School	81.8	155.5	91.8	174.5
Elementary/Middle/ High School	145.4	276.2	145.4	276.2
High School	47.0	89.2	47.0	89.2
Fire Station	5.5	10.5	3.3	6.3
Subtotal - Public Facilities	331.4	629.7	397.3	754.8
Losses ^(d)	-	2,157.7	-	2,353.5
Total	6,096.5	26,970.7	6,096.5	29,419.2
<p>(a) From the Recirculated Draft Environmental Impact Report – West Area Neighborhoods Specific Plan (De Novo, 2024), Table 2.0-1.</p> <p>(b) Totals and Subtotals may differ from the Recirculated Draft Environmental Impact Report – West Area Neighborhoods Specific Plan Table 2.0-1 due to rounding.</p> <p>(c) Demands calculated using unit demand factors from Table 2-1.</p> <p>(d) Losses are assumed to be 8 percent of water use. Based on the City of Fresno 2020 UWMP, Table 4-1 and Section 4.2.2.</p>				

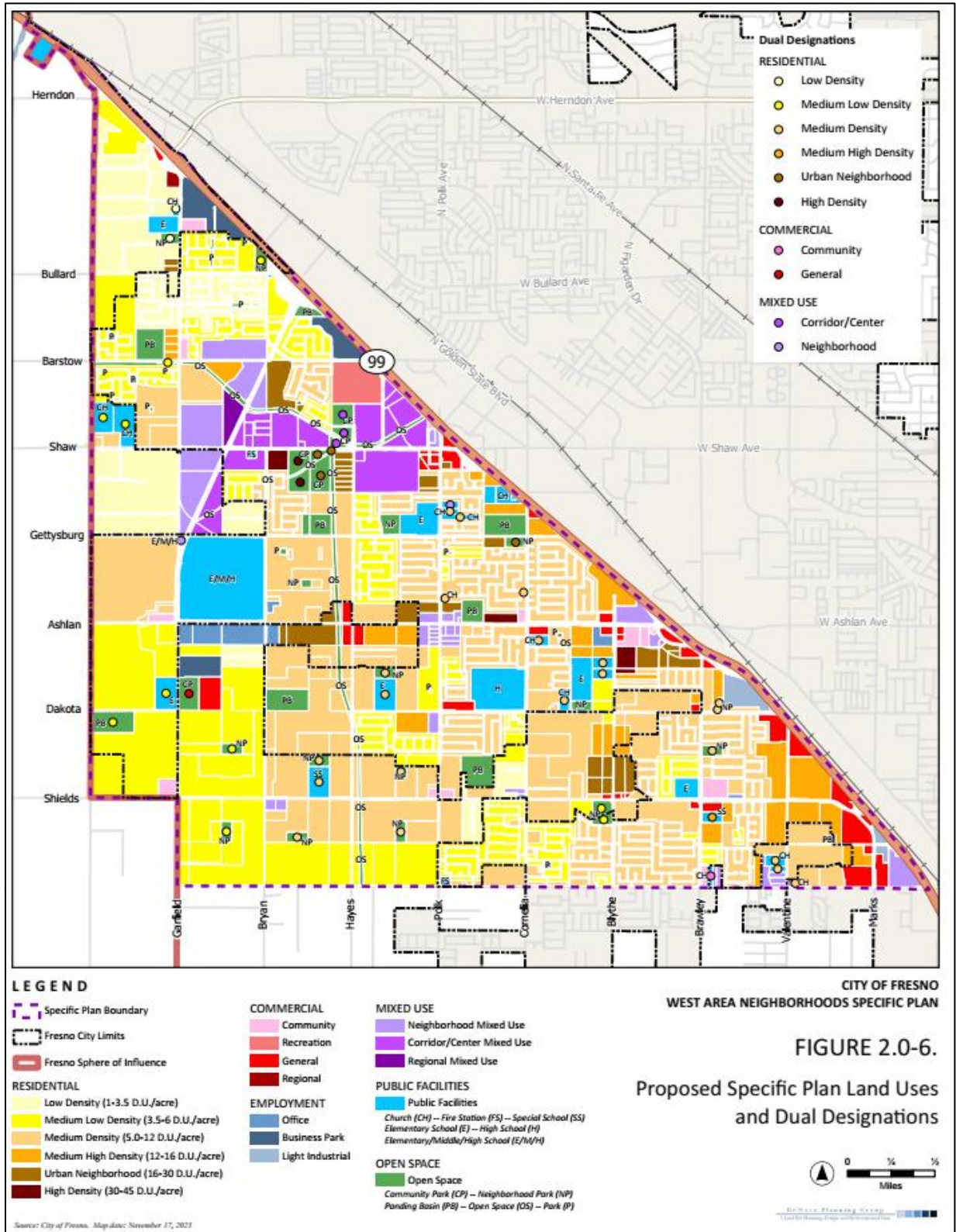


Figure 2-2. Proposed Specific Plan Land Uses

3.0 REQUIRED DETERMINATIONS

3.1 Does SB 610 apply to the Proposed Project?

10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912 (a) "Project" means any of the following:

- (1) A proposed residential development of more than 500 dwelling units.*
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.*
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.*
- (4) A proposed hotel or motel, or both, having more than 500 rooms.*
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.*
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.*
- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.*

Based on the following facts, SB 610 does apply to the Proposed Project.

- The City of Fresno has determined that the Proposed Project is subject to the California Environmental Quality Act (CEQA) and that an EIR is required.
- The Proposed Project includes residential, commercial, and light industrial land uses, and therefore is a mixed-use project. The Proposed Project includes up to 83,129 residential dwelling units, up to 59,777,271 sf of retail, and up to 4,572,213 sf of commercial office buildings, and therefore meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (1), paragraph (2) and paragraph (3). The Proposed Project therefore meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (6) for mixed-use projects.

The Proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Therefore, according to Water Code section 10910(a), a WSA is required for the Proposed Project.

3.2 Who is the Identified Public Water System?

10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project

10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections.

As shown on Figure 2-1, the majority of the Proposed Project is located within the City of Fresno's Limits. The City's water system service area includes most areas within the City Limits. Therefore, the City is the identified public water system for the Proposed Project.

3.3 Does the City have an adopted Urban Water Management Plan (UWMP) and does the UWMP include the projected water demand for the Proposed Project?

10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

The City's most recently adopted UWMP was adopted by the Fresno City Council in July 2021 and is incorporated by reference into this WSA². The City's 2020 UWMP included water demand projections for current water demands within the City (baseline demand) and anticipated water demands associated with future development projects and planning areas within the City's General Plan SOI through 2045.

Water demands for the Proposed Project are not specifically designated in the City's 2020 UWMP. However, the General Plan planning area (the SOI) was included in the UWMP and the Specific Plan is the implementation of the General Plan with slightly different land use types, so the Proposed Project is included in the City's 2020 UWMP. The City's ability to meet the projected water demands for the Proposed Project is described in Section 7 of this WSA.

² City of Fresno 2020 Urban Water Management Plan, prepared by Water Systems Consulting, Inc., July 2021.

4.0 CITY OF FRESNO WATER SERVICE AREA

4.1 Water Service Area

The City of Fresno is located in San Joaquin Valley in Fresno County, California, and was incorporated in 1885. The existing incorporated area of the City encompasses approximately 115 square miles (2020 UWMP). The City's General Plan includes the City's SOI, the area outside of the City limits that the City expects to annex and urbanize in the future.

With a few exceptions, the City's water service area is coterminous with the City Limits. As future developments within the SOI, but outside the City Limits, are approved, they will be annexed into the City and served by the City water system. Figure 2-1 illustrates the current City Limits and the SOI.

4.2 Population

The City experienced rapid growth since it was founded by the Central Pacific Railroad in 1872 up through the mid-1990s, when the City's annual growth rate was typically greater than 2 percent. From 1995 to 2015, the annual growth rate has decreased to an average of 1.3 percent, and since 2015, the rate has not surpassed 1.0 percent.

The population served by the City Water Division is slightly higher than the City's population after adding unincorporated areas served by the City and removing areas within the City limits served by private water companies, special districts, or private wells. The City acquired County service areas and facilities in 1989, which increased the service area population to slightly greater than the City population since 1990.

According to the City's Planning and Development Department, the City's water service area population is anticipated to continue to grow along with the City, with some slightly higher growth years anticipated within the next 10 years due to multiple large developments planned for completion in the near term. The long-term water service area population annual growth rate is expected to be 1.44 percent between 2020 and 2056 to account for absorbing these areas into the City's water system. Population buildout is expected by 2056.

Table 4-1 shows the City's projected population in five-year increments to the year 2045.

Table 4-1. City of Fresno Existing and Projected Population						
Years	2020	2025	2030	2035	2040	2045
Population Projection ^(a)	550,217	609,433	674,677	719,327	765,278	812,529
(a) From the City of Fresno 2020 UWMP, Table 3-3.						

4.3 Climate

The City's service area is in California's San Joaquin Valley in Fresno County along Highway 99. The climate of the area is best described as Mediterranean, characterized by hot dry summers and cool winters. Precipitation in the area averages around 11 inches per year, as shown in Table 4-2. As shown by the average evapotranspiration (ET_o) and temperature values in Table 4-2, the City's water use in the summer months is significantly higher than in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

Table 4-2. City of Fresno Climate Data^(a)

Month	Average ET _o , inches	Average Rainfall, inches	Average Min Temperature, F	Average Max Temperature, F
January	1.17	2.33	56.9	37.4
February	1.98	1.8	62.6	39.8
March	3.73	1.99	68.4	43.6
April	5.43	0.99	73.7	46.9
May	7.33	0.54	81.3	53.2
June	8.41	0.19	89.6	59.1
July	8.8	0.02	95.7	63.8
August	7.82	0.01	94.6	62.5
September	5.69	0.07	89.6	57.9
October	3.68	0.59	79.3	49.3
November	1.85	0.98	66.2	40.6
December	1.1	1.83	56.5	36.1
Annual Totals/Average	56.99	11.34	76.2	49.2

(a) From the City of Fresno 2020 UWMP, Table 3-2.

5.0 CITY OF FRESNO WATER DEMANDS

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

The descriptions provided below for the City's water demands have been taken, for the most part, from the City's 2020 UWMP, which was adopted in July 2021. Supplemental information from other available reports has been included to provide the most recent data available and to meet the specific requirements of SB 610.

5.1 Historical and Existing Water Demand

The City's water demand has decreased as a result of the economic downturn of 2008 through 2011, water use reductions in response to recent drought conditions, and metering of residential properties. Since 2013, all water services in the City's water service area have been metered. Single family residential water use has decreased since the Single-Family Metering Program was completed in 2013. Landscape irrigation demands did decrease in 2015 and 2016, likely due to the drought restrictions, and continue to recover after the drought ended in 2017. Table 5-1 shows the City's historical water demands for 2005, 2010, and 2013-2020.

Table 5-1. Historical Water Demand, af/yr								
	2013 ^(a)	2014 ^(a)	2015 ^(a)	2016 ^(a)	2017 ^(a)	2018 ^(a)	2019 ^(a)	2020 ^(b)
Total Potable and Raw Water Demand	133,692	122,191	102,308	103,045	110,525	110,725	106,500	121,993
(a) City of Fresno 2020 UWMP, Figure-4-1.								
(b) City of Fresno 2020 UWMP, Table 4-2.								

5.2 Future Water Demand

The City's 2045 projected water demand at buildout (based on existing water demand, the projected demands for the West Area under the General Plan, the difference in demands for the West Area between the Specific Plan and the General Plan, and undefined future developments) is summarized in Table 5-2. The General Plan is expected to be built out by 2056, but for the purposes of this WSA the West Area was assumed to be annexed and built out by 2045. The City's preliminary water demand projections for the West Area under the General Plan were higher than for the Specific Plan, resulting in a negative value if the Proposed Project is built instead of the General Plan.

Table 5-2. Projected Future Water Demand at 2045

	Water Demand, af/yr
Current (2020) Water Demand ^(a)	121,993
General Plan for West Area ^(b)	26,971
Subtotal (without Project)	148,964
Project (West Area Neighborhood Specific Plan) ^(b,c)	2,448
Subtotal (with Project)	151,412
Undefined Future Developments ^(d)	90,035
Total Water Demand	241,447
(a) Data from Table 5-1 of this WSA. (b) Data from Table 2-2 of this WSA. (c) Difference between West Area Neighborhood Specific Plan and General Plan for West Area. (d) Balance between Subtotal (with Project) and Total Water Demand.	

5.3 Dry Year Water Demand

As shown in Table 5-1, the City's 2015 water demand was significantly lower than the 2013 demand in response to the drought and the Governor's April 2015 Executive Order B-29-15 mandating 25 percent water conservation statewide. To reduce water use by 25 percent statewide, the State Water Resources Control Board (SWRCB) adopted a regulation which placed each urban water supplier into one of nine tiers which are assigned a conservation standard, ranging between 4 percent and 36 percent. Each month, the SWRCB compared every urban water suppliers' water use with their use for the same month in 2013 to determine if they were on track for meeting their conservation standard. The City of Fresno was initially placed into Tier 7 with a water conservation standard of 28 percent as compared to 2013 use (the City's conservation standard was reduced to 25 percent in early 2016) (SWRCB, 2015; SWRCB, 2016).

The City has adopted a set of restrictions on water usage that helps promote water conservation and overall water use consumption. The City Municipal Code contains sections on water conservation that are to take place under normal water supply conditions. These measures are mandated year-round and can be found in detail in Section 6-520(a) of the City's Municipal Code. The City's Water Shortage Contingency Plan, outlined in Section 8 and Appendix J of the City's 2020 UWMP, includes a five-stage plan describing specific actions to reduce water demand more than 50 percent in the event of a water supply shortage or emergency. Demand is expected to decrease as the City implements water conservation measures in response to multiple dry years or other supply changes (City of Fresno 2020 UWMP).

Table 5-3 presents the projected future dry year potable water demand.

Table 5-3. Projected Future Dry Year Water Demand, af/yr

Hydrologic Condition	2025	2030	2035	2040	2045
Single Dry Year ^(a)	164,092	176,132	184,174	192,228	200,287
Multiple Dry Year First Year ^(b)	199,204	212,756	222,310	231,876	241,447
Multiple Dry Years Second Year ^(b)	199,204	212,756	222,310	231,876	241,447
Multiple Dry Years Third Year ^(b)	190,267	193,637	197,736	201,753	205,708
Multiple Dry Years Fourth Year ^(b)	162,551	165,920	170,020	174,036	177,992
Multiple Dry Years Fifth Year ^(b)	199,204	212,756	222,310	231,876	241,447
(a) From the City of Fresno 2020 UWMP, Table 7-2.					
(b) From the City of Fresno 2020 UWMP, Table 7-3.					

6.0 CITY OF FRESNO WATER SUPPLIES

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts

10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

- (A) Written contracts or other proof of entitlement to an identified water supply.*
- (B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.*
- (C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
- (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

It is anticipated that the Proposed Project, if approved by the City, would be served from City's existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

The water supply for the Proposed Project will have the same water supply reliability and water quality as the water supply available to the City's other existing and future water customers. Proponents of individual developments within the Proposed Project area will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

The water supplies needed to serve the Proposed Project (together with existing water demands and planned future uses) are described in the City's 2020 UWMP. Therefore, the descriptions provided below for the City's water supplies have been taken, for the most part, from the City's 2020 UWMP, which was adopted in July 2021. Supplemental information from other available reports has also been included to provide the most recent data available and to meet the specific requirements of SB 610.

6.1 Existing Water Supplies

The City currently receives water supplies from four sources:

- Surface water contract water that is delivered to the City by two separate sources:
 - FID Agreement for Kings River water.
 - USBR Central Valley Project (CVP) Friant Division Contract for San Joaquin River water.
- Groundwater that is pumped from groundwater wells located within the City.
- Recycled water that is treated at the RWRF and NFWRF. This water may only be used for non-potable uses.

Each of these existing supplies is described below.

6.1.1 Surface Water Contracts

The cumulative supply these contracts bring to the City provide the opportunity to construct surface water treatment facilities and optimize the use of these supplies. This conjunctive use approach continues the process of allowing the groundwater system to recover. Each of the surface water supplies is summarized in the following two sections (City of Fresno 2020 UWMP).

6.1.1.1 Surface Water Supplies through FID Agreement

In May of 1976 the City of Fresno and FID executed an agreement that stipulated that as land is annexed to the City, the City will receive a pro rata share of FID's Kings River entitlement; this agreement was revised, amended, and restated in December, 2016³. The pro rata share is based on the area annexed to the City, and within FID's boundaries, as compared to the total area of FID's water service area. The agreement stipulates the allocation amount will be reviewed each year by the two agencies to address new annexations to the City. So, as the City annexes new areas the allocation will increase up to the limits stipulated in the 2016 agreement. Utilizing GIS, there will be approximately 71,925 acres of land within the SOI and within FID's water service boundaries at SOI buildout, excluding Bakman Water Company, CSU Fresno, and County islands.

As the City incorporates new land area into its service area, the percentage of FID supply increases. However, the 2016 FID Agreement sets the maximum percentage as 29.0 percent, although the City's service area is anticipated to expand and encompass more than 29.0 percent of FID's service area between 2025 and 2030. In 2020, the City's percentage of overall FID Kings deliveries was 25.79 percent. The supply projections in this plan limit the City's FID supply with the 29.0 percent cap, but if the agreement were revised in the future the City's FID allocation percentage could grow beyond 29.0 percent as the water service area expands (City of Fresno 2020 UWMP).

³ Revised, Amended, and Restated Cooperative Agreement between Fresno Irrigation District and City of Fresno for Water Utilization and Conveyance, dated December 20, 2016.

6.1.1.2 Surface Water Supplies through USBR Contract

The City, through an agreement originally executed in January of 1961, secured a surface water supply from USBR CVP - Friant Division. This agreement, for an annual water supply of 60,000 af of Class 1 water, was last renewed in 2010 as a Section 9(d) Contract that provides water from the San Joaquin River in perpetuity. The USBR CVP – Friant Division facilities generally include: Friant Dam (Millerton Reservoir); the Friant Kern Canal; and the Madera Canal. The Friant-Kern Canal is maintained and operated by the Friant Water Authority. The USBR water supply is a wholesale supply.

Class 1 water was intended to be a supply that would be dependable in practically every year, regardless of the type of hydrologic water year. Class 2 water is essentially excess water available as determined by USBR and less reliable than Class 1 water. Class 1 water has historically been very reliable until the San Joaquin River Restoration Settlement and more recently by the restrictions on diversions from the Delta due to concerns over the declining health of Delta ecosystem (City of Fresno 2020 UWMP).

6.1.2 Groundwater

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

6.1.2.1 Groundwater Overview

The City pumps groundwater from a portion of the Kings Subbasin underlying the City. The City's 2020 UWMP states that the City has a network of over 270 municipal wells and currently operates approximately 202 municipal supply wells within the Kings Subbasin. Groundwater quality is a concern because the groundwater basin has several major contaminant plumes involving organic compounds, inorganic compounds, solvents, pesticides, and other contaminants. A number of the City's wells are currently being treated or blended to address various contaminants. The total well capacity, when the City's WMP was written, was approximately 460 mgd.

6.1.2.2 Basin Description

The City's wells are located within the northern part of the Kings Subbasin of the San Joaquin Valley Groundwater Basin. The following section describes the Kings Subbasin, including its water-bearing formations, water levels, and water quality. Much of the following information has been incorporated from the City's 2020 UWMP. Except where noted, the description of the sub-basin is based largely on information provided in the 2016 Department of Water Resources (DWR) Bulletin 118 Interim Update, in which the groundwater basin description was last updated in December 2016.

The Kings Subbasin is not adjudicated and there are no legal restrictions to groundwater pumping. The Kings Subbasin is generally bounded: on the north by the San Joaquin River; on the west by the Fresno Slough; on the south by the Kings River and Cottonwood Creek; and on the east by the Sierra foothills. The upper several hundred feet within the Kings Subbasin generally consists of highly permeable, coarse-grained deposits, which are termed older alluvium. Coarse-grained stream channel deposits, associated with deposits by the ancestral San Joaquin and Kings Rivers, underlie much of the northwest portions of the City. Below the older alluvium to depths ranging from about 600 to 1,200 feet below ground surface, the finer-grained sediments of the Tertiary-Quaternary continental deposits are typically encountered. Substantial groundwater has been produced and utilized from these depths by the City; however, deeper deposits located in the southeastern and northern portions of the City have produced less groundwater. There are also reduced deposits in the northern and eastern portions of the City, at depths generally below 700 or 800 feet, which are associated with high concentrations of iron, manganese, arsenic, hydrogen sulfide, and methane gas. Groundwater at these depths does not generally provide a significant source for municipal supply wells. The City's average groundwater depth in 2015 is approximately 130 below the ground surface.

6.1.2.3 Conditions of Overdraft

The Sustainable Groundwater Management Act (SGMA) directs DWR to identify groundwater basins and subbasins that are in conditions of critical overdraft. This designation is determined based upon the presence of "undesirable impacts" such as seawater intrusion, land subsidence, groundwater depletion, and chronic lowering of groundwater levels. Per DWR's current list of critically overdrafted basins, finalized in February 2019, the Kings Subbasin is designated as a critically overdrafted basin.

As part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, DWR is required to prioritize California groundwater basins to help identify, evaluate, and determine the need for additional groundwater level monitoring. Per the current CASGEM draft prioritization, completed in April 2019, the Kings Subbasin is a high priority subbasin (DWR, 2019).

The City has long made efforts toward offsetting the decline of groundwater levels and minimizing overdraft conditions through an active intentional recharge program that started in 1971. Through cooperative agreements with Fresno Metropolitan Flood Control District (FMFCD) and FID, the City has

access to not only City-owned basins, but also to specific facilities owned and operated by these two agencies. The City has averaged over 60,000 af/yr the previous five years and plans to gradually increase recharge by about 540 af/yr each year. However, during wet years the City will recharge more water when it is available to allow to the City to draw on additional groundwater during dry years when surface water is not available.

6.1.2.4 Groundwater Management

As part of a partnership of local municipal water purveyors, irrigation districts, a flood control district, and the overlying county, the Fresno Area Regional Groundwater Management Plan (FARGMP) was prepared in conformance with AB 3030 and SB 1938. The objectives of the FARGMP have been developed to monitor, protect, and sustain groundwater within the region. The City of Fresno and the other participating agencies subsequently adopted the groundwater management plan in 2006 (City of Fresno 2020 UWMP). The City of Fresno falls within the North Kings Groundwater Sustainability Agency (NKGSA). The NKGSA prepared and submitted its GSP on January 28, 2020 and is awaiting completion of DWR's review (DWR SGMA Portal GSP Status Summary).

6.1.2.5 Historical Groundwater Use

As discussed previously, the City has a network of over 270 municipal wells and currently operates approximately 202 municipal supply wells within the Kings Subbasin, according to the 2020 UWMP. The City's groundwater production over the last 18 years is provided in Table 6-1.

Table 6-1. City of Fresno Historical Groundwater Production, af/yr	
Year	Total Groundwater Production
2003	165,200
2004	160,000
2005	141,500
2006	136,000
2007	146,300
2008	148,700
2009	138,200
2010	128,600
2011	119,900
2012	119,500
2013	123,200
2014	106,800
2015	82,500
2016	99,100
2017	105,200
2018	76,800
2019	54,600
2020	55,000
(a) From the City of Fresno 2020 UWMP, Figure-6-7.	

6.1.2.6 Projected Future Groundwater Use

The amount of groundwater pumped during dry years is not projected to differ from the amount pumped during normal years. The City's projected future groundwater production through 2045 is provided in Table 6-2.

Table 6-2. City of Fresno Projected Future Groundwater Production in Normal and Dry Years^(a), af/yr					
	2025	2030	2035	2040	2045
Total Groundwater Production During a Normal Year ^(a)	138,090	143,630	149,100	154,490	159,820
Total Groundwater Production During Dry Years ^(b)	138,090	143,630	149,100	154,490	159,820
(a) From the City of Fresno 2020 UWMP, Table 7-1.					
(b) From the City of Fresno 2020 UWMP, Table 7-2.					

6.1.2.7 Groundwater Sufficiency

The City's 2020 UWMP addressed the sufficiency of the City's groundwater supplies, in conjunction with the City's other existing and additional water supplies, to meet the City's existing and planned future uses. Based on the information provided above and that included in the City's 2020 UWMP, the City's groundwater supply, together with the City's other existing and additional planned future water supplies, is sufficient to meet the water demands of the Proposed Project, in addition to the City's existing and planned future uses. See Section 7 for a detailed determination of the sufficiency of the City's water supply portfolio, including groundwater, to meet the demands of the Proposed Project.

6.2 Future Water Projects

The inclusion of planned future water supplies in this WSA is specifically allowed by the Water Code:

Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

The City has a number of future capital improvement projects planned to maintain and upgrade existing water supply and distribution facilities. The City is also undergoing a large capital improvement program outlined in their 2014 Metropolitan Water Resources Management Plan (Metro Plan). The timing for groundwater recharge capacity expansion will be examined as part of the Metro Plan update and is assumed to increase to allow for an additional 540 af/yr of recharge to occur on average each year. The City has constructed an 80 mgd surface water treatment plant, called the Southeast Surface Water Treatment Facility (SES WTF). The City upgraded their Northeast Surface Water Treatment Facility (NES WTF) from 30 mgd to 60 mgd. The City expects to implement construction on the final portion of the Southwest recycled water distribution system in 2021. The completed distribution system will allow an additional 5,000 AF of recycled water use in the City to offset potable demands that can be used in all hydrological year types. The expansion is projected to be completed by 2025. In addition, the City is evaluating future beneficial transfers and exchanges of the City's USBR water in normal water years when available water supplies exceed demands.

6.3 Summary of Existing and Additional Planned Future Water Supplies

Table 6-3 provides a summary of the City’s 2020 actual water supply deliveries and projected future available water supply available. A discussion of the future anticipated availability of these existing and additional planned future water supplies during dry years is provided in the next section.

Table 6-3. City of Fresno Historical and Projected Water Supplies						
Units: af/yr	2020 ^(a)	2025 ^(b)	2030 ^(b)	2035 ^(b)	2040 ^(b)	2045 ^(b)
Groundwater	55,028	138,090	143,630	149,100	154,490	159,820
USBR CVP	37,447	60,000	60,000	60,000	60,000	60,000
FID Kings River	71,292	125,030	131,600	131,600	131,600	131,600
Total Potable Water Supply	163,767	323,120	335,230	340,700	346,090	351,420
Recycled Water, RWRF	858	5,800	5,800	5,800	5,800	5,800
Recycled Water, NFWRF	54	110	110	110	110	110
Total Recycled Water Supply	912	5,910	5,910	5,910	5,910	5,910
Total Water Supply	164,679	329,030	341,140	346,610	352,000	357,330
(a) From City of Fresno 2020 UWMP, Table 6-7.						
(b) From City of Fresno 2020 UWMP, Table 6-8.						

6.4 Water Supply Availability and Reliability

Water Code section 10910 (c)(4) requires that a WSA include a discussion with regard to “whether total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.” Accordingly, this WSA addresses these three hydrologic conditions through the year 2045.

Also, in response to historical drought conditions and the (now expired) State of Emergency proclaimed by Governor Brown, first in January 2014 and most recently in April 2015, this WSA provides a discussion of the availability and reliability of the City’s available water supplies to meet the City’s water demands in the event that the City’s surface water supplies are limited under emergency water supply conditions.

6.4.1 Normal, Single Dry, and Multiple Dry Years

The reliability of each of the City’s existing and additional planned water supplies and their projected availability during normal, single dry, and multiple dry years, as described in Section 7 of the City’s 2020 UWMP, is described below and summarized in Table 6-4. The City expects to meet system water demand, regardless of regional hydrology (City of Fresno 2020 UWMP).

The City’s surface water supply could face constraints during dry years.

Water supplied from the FID contract is most susceptible to annual hydrologic conditions. The annual variability of precipitation, snowpack, and river flow conditions will then influence, and may constrain, the City’s allocation from this source. Another factor that may constrain the availability of Kings River water supply is scheduled maintenance of FID’s vast canal network. FID typically terminates water deliveries to the City’s water treatment facilities in the months of November and/or December so they

may perform necessary infrastructure repairs and maintenance. To ensure year-round delivery of water to the SESWTF a raw water pipeline is being constructed.

The City also has a contract for 60,000 af/yr of Class 1 water from the USBR's CVP, which is affected by required downstream flows for the San Joaquin River and the imposed restrictions on water diversions from the Delta. These restrictions have resulted in years where the CVP - Friant Division contractors, such as the City of Fresno, receives zero allocations. The water supply is also restricted by maintenance of infrastructure, which results in termination of water supply during the months of November and/or December. To improve delivery reliability and to protect the source water from deleterious impacts from environmental and other malicious acts, the City completed a 4.6-mile long raw water pipeline that will permit the delivery of USBR water from the Friant-Kern Canal directly to the NESWTF (Recharge Fresno 2019).

Groundwater has long been the primary water supply source for the City. The continued use of groundwater is key to the sustainable use of all supplies, which is inclusive of surface water and recycled water. The groundwater supply has declined over the last eighty years, requiring new deeper wells and the lowering of pumps in existing wells. A constraint to lowering the pumps in existing wells is the limited depth of numerous existing municipal water wells. If the declining groundwater trend isn't reversed, it may cause a reduction in pumping capacity of the City's water system. Another constraint to the use of groundwater is the negative impacts from contamination. To ensure the continued beneficial use of the groundwater supply, the City will have to remain proactive in pursuing responsible parties so the proper remediation is conducted to preserve the groundwater system as a viable and sustainable resource in perpetuity. Despite these concerns, groundwater supply during normal and dry years was assumed to be constant, as shown in Table 6-2.

The supply of recycled water produced by the City's recycled water facilities is expected to be unaffected by single or multiple dry years. While the supply of wastewater used to produce the recycled water may decrease somewhat if voluntary or mandatory conservation measures are enacted.

Table 6-4. Multiple Dry Year Water Supply, af-ft/yr

	2025	2030	2035	2040	2045
Normal Year ^(a)	329,030	341,140	346,610	352,000	357,330
Single Dry Year ^(b)	189,852	195,392	200,862	206,252	211,582
Multiple Dry Year 1 ^(c)	273,725	279,265	284,735	290,125	295,455
Multiple Dry Year 2 ^(c)	274,626	280,166	285,636	291,026	296,356
Multiple Dry Year 3 ^(c)	217,568	223,108	228,578	233,968	239,298
Multiple Dry Year 4 ^(c)	189,852	195,392	200,862	206,252	211,582
Multiple Dry Year 5 ^(c)	314,840	320,380	325,850	331,240	336,570

(a) City of Fresno 2020 UWMP, Table 7-1.

(b) City of Fresno 2020 UWMP, Table 7-2.

(c) City of Fresno 2020 UWMP, Table 7-3.

6.4.2 Emergency Water Supply Conditions

In addition to the water conservation measures outlined in Section 6-520 of the Fresno Municipal Code, the City's 2020 UWMP includes a Water Shortage Contingency Plan (WSCP) to address situations when catastrophic water supply interruptions occur due to regional power outage, earthquake, or other disasters; and when drought occurs. The City's WSCP includes an analysis of existing and projected water

demands and supplies, a water conservation and rationing plan with mandatory prohibitions and penalties, and an analysis of projected revenues and expenditures. The WSCP outlines five stages of action to be undertaken in response to water supply shortages, including more than 50 percent reduction in water supply and an outline of specific water supply conditions that are applicable to each stage. The City also has a Water Quality Emergency Notification Plan in place to coordinate the City's response in the event of a catastrophic water supply interruption.

Triggering from one stage to the next is done based on water supply conditions. Factors to take into consideration include decreases in surface water from USBR and FID, from reductions in infrastructure capacity related to the water treatment plants or pipelines, decrease in groundwater levels in 30 key wells, or climate or state political conditions that would impact the allotment of water supply. Consumption reduction methods outlined in the WSCP include limiting or prohibiting the watering of lawns and other landscape areas, restricting water use at outdoor facilities, restrictions on water use for decorative water features, and prohibiting car washes or laundries which do not use recycled or recirculated water. Rate changes and fees may be implemented to penalize excessive water use or violation of water use ordinances (City of Fresno 2020 UWMP).

If an emergency were to occur, requiring the City to implement its WSCP, all of the City's customers, including those within the Proposed Project area, would be subject to the same water conservation measures and water use restrictions as included in City's WSCP.

7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY BASED ON THE REQUIREMENTS OF SB 610

Water Code section 10910 states:

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

Pursuant to Water Code section 10910(c)(4) and based on the technical analyses described in this Water Supply Assessment, the City finds that the total projected water supplies determined to be available for the Proposed Project during Normal, Single Dry, and Multiple Dry water years during a 20-year projection will meet the projected water demand associated with the Proposed Project, in addition to existing and planned future uses.

Table 7-1 summarizes the projected availability of the City's existing and planned future potable water supplies and the City's projected water demands in normal, single dry and multiple dry years through 2045. As shown in Table 7-1, demand within the City's service area is not expected to exceed the City's supplies in any normal, single dry, or multiple dry year between 2020 and 2045.

Table 7-1. City of Fresno Water Demand Versus Water Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years, af/yr						
Hydrologic Condition		2025	2030	2035	2040	2045
Normal Year ^(a)						
Available Water Supply		329,030	341,140	346,610	352,000	357,330
Total Water Demand		199,204	212,756	222,310	231,876	241,447
Potential Surplus (Deficit)		129,826	128,384	124,300	120,124	115,883
Percent Shortfall of Demand		-	-	-	-	-
Single Dry Year ^(b)						
Available Water Supply		189,852	195,392	200,862	206,252	211,582
Total Water Demand		164,092	176,132	184,174	192,228	200,287
Potential Surplus (Deficit)		25,760	19,260	16,688	14,024	11,295
Percent Shortfall of Demand		-	-	-	-	-
Multiple Dry Years ^(c)						
Multiple Dry Year 1	Available Water Supply	273,725	279,265	284,735	290,125	295,455
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	74,521	66,509	62,425	58,249	54,008
	Percent Shortfall of Demand	-	-	-	-	-

Table 7-1. City of Fresno Water Demand Versus Water Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years, af/yr

Hydrologic Condition		2025	2030	2035	2040	2045
Multiple Dry Year 2	Available Water Supply	274,626	280,166	285,636	291,026	296,356
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	75,422	67,410	63,326	59,150	54,909
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 3	Available Water Supply	217,568	223,108	228,578	233,968	239,298
	Total Water Demand	190,267	193,637	197,736	201,753	205,708
	Potential Surplus (Deficit)	27,301	29,471	30,842	32,215	33,590
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 4	Available Water Supply	189,852	195,392	200,862	206,252	211,582
	Total Water Demand	162,551	165,920	170,020	174,036	177,992
	Potential Surplus (Deficit)	27,301	29,472	30,842	32,216	33,590
	Percent Shortfall of Demand	-	-	-	-	-
Multiple Dry Year 5	Available Water Supply	314,840	320,380	325,850	331,240	336,570
	Total Water Demand	199,204	212,756	222,310	231,876	241,447
	Potential Surplus (Deficit)	115,636	107,624	103,540	99,364	95,123
	Percent Shortfall of Demand	-	-	-	-	-

(a) From the City of Fresno 2020 UWMP, Table 7-1.

(b) From the City of Fresno 2020 UWMP, Table 7-2.

(c) From the City of Fresno 2020 UWMP, Table 7-3.

8.0 WATER SUPPLY ASSESSMENT APPROVAL PROCESS

10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

10911 (b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

The Fresno City Council must approve this WSA at a regular or special meeting. Furthermore, the City must include this WSA in the Draft EIR that is being prepared for the Proposed Project.

In addition, SB 221 applies to residential subdivisions of over 500 dwelling units and requires that the water supplier provide a written verification that the water supply for the project is sufficient, prior to issuance of the final permits. Because the Proposed Project includes up to 83,129 residential dwelling units, it is subject to the requirements of SB 221 (Government Code section 66473.7).

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APPENDIX F

Noise Impact Study

West Area Neighborhood Specific Plan (WANSP) Update

Noise Impact Study

City of Fresno, CA

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set forth by the Federal, State and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance to the applicable noise criterion as outlined within the City's Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An analysis of traffic noise impacts to and from the project site
- An analysis of stationary noise impacts to and from the project site
- An analysis of construction noise impacts

1.2 Site Location and Study Area

The West Area Neighborhoods Specific Plan (also known as "Specific Plan", "Plan Area") encompasses approximately 7,077 acres (or a little more than 11 square miles) in the City of Fresno city limits and unincorporated Fresno County. The footprint of the Specific Plan is referred to as the "Plan Area." Of the eleven square miles within the Plan Area, 6.9 square miles are in the city limits and 4.1 square miles are in the growth area. The growth area is land outside the city limits but within the City's Sphere of Influence (SOI) boundary, which is the adopted limit for future growth.

The Plan Area is triangular in shape and located west of State Route 99. It is bounded on the south by West Clinton Avenue, and to the west by Grantland and Garfield Avenues. The Plan Area includes the southwest portion of Highway City adjacent to State Route 99. See Figure 2.0-1 for the regional location map and Figure 2.0-2 for the Plan Area vicinity map.

The Plan Area is relatively flat with a natural gentle slope near State Route 99. The Plan Area topography ranges in elevation from approximately 283 to 315 feet above mean sea level. A large amount of land in the Plan Area is farmland or rural residential lots with large, uneven, and underutilized parcels.

1.3 Proposed Project Description

The Plan Area has approximately seven different existing land uses which include the following:

- **Multiple Family Residential:** Approximately 3.3 percent, or 198.0 acres, of the Plan Area account for multi-family residential development. These uses are primarily located adjacent to arterial roads with easy access to State Route 99, and Fresno Area Express (FAX) service lines.

- **Single-Family Residential:** Approximately 50.3 percent, or 50.3 acres, of the existing uses within the Plan Area are currently developed with single-family residential uses. These uses are located primarily within the city limits but also include rural residential uses outside the city limits.
- **Vacant Land:** Approximately 20.2 percent of the land in the Plan Area, or 1,218.4 acres, account for vacant lands. Vacant areas are located throughout the Plan Area, in both the city limits and SOI. Vacant areas represent infill opportunities within the Plan Area's densest neighborhoods.
- **Public/Government Facilities/Tax Exempt:** Approximately .1 percent, or 490.1 acres, of land within the Plan Area contain public or government facilities. These land uses include Central Unified School District facilities, fire stations, and places of worship.
- **Agricultural Land:** Approximately 11.9 percent or 720.30 acres in the Plan Area contain open space or agricultural land. While there are some open space land uses within the city, most of these uses are primarily located in the SOI. These uses include parks and ponding basins.
- **Industrial Uses:** Approximately 1.3 percent, or 79.78 acres, of the Plan Area account for industrial uses. The largest industrial land use in the Plan Area contains an agricultural business located at the intersection of West Dakota Avenue and North Grantland Avenue.
- **Commercial Uses:** Approximately 5.0 percent, or 299.57 acres, of the Plan Area account for commercial uses. Commercial uses are spread throughout the eastern and southeastern portions of the Plan Area, closer to State Route 99.

Surrounding land uses include State Route 99, the unincorporated communities of Herndon, Highway City, and Muscatel, and incorporated areas of the City of Fresno to the north (including mostly industrial uses), incorporated areas of the City of Fresno to the east (also including mostly industrial uses), unincorporated Fresno County and incorporated areas of the City of Fresno to the south (including farmland uses, rural residential uses, low density residential uses, and underutilized parcels) and unincorporated Fresno County to the west (including farmland and rural residential uses).

The proposed Specific Plan will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 7,077-acre Plan Area. The Specific Plan will serve as a bridge between the Fresno General Plan and individual development applications in the Plan Area.

1.4 Revisions to Core Goals

In addition to the proposed land use plan, the following are revisions to the core goals provided in the General Plan for the Plan Area:

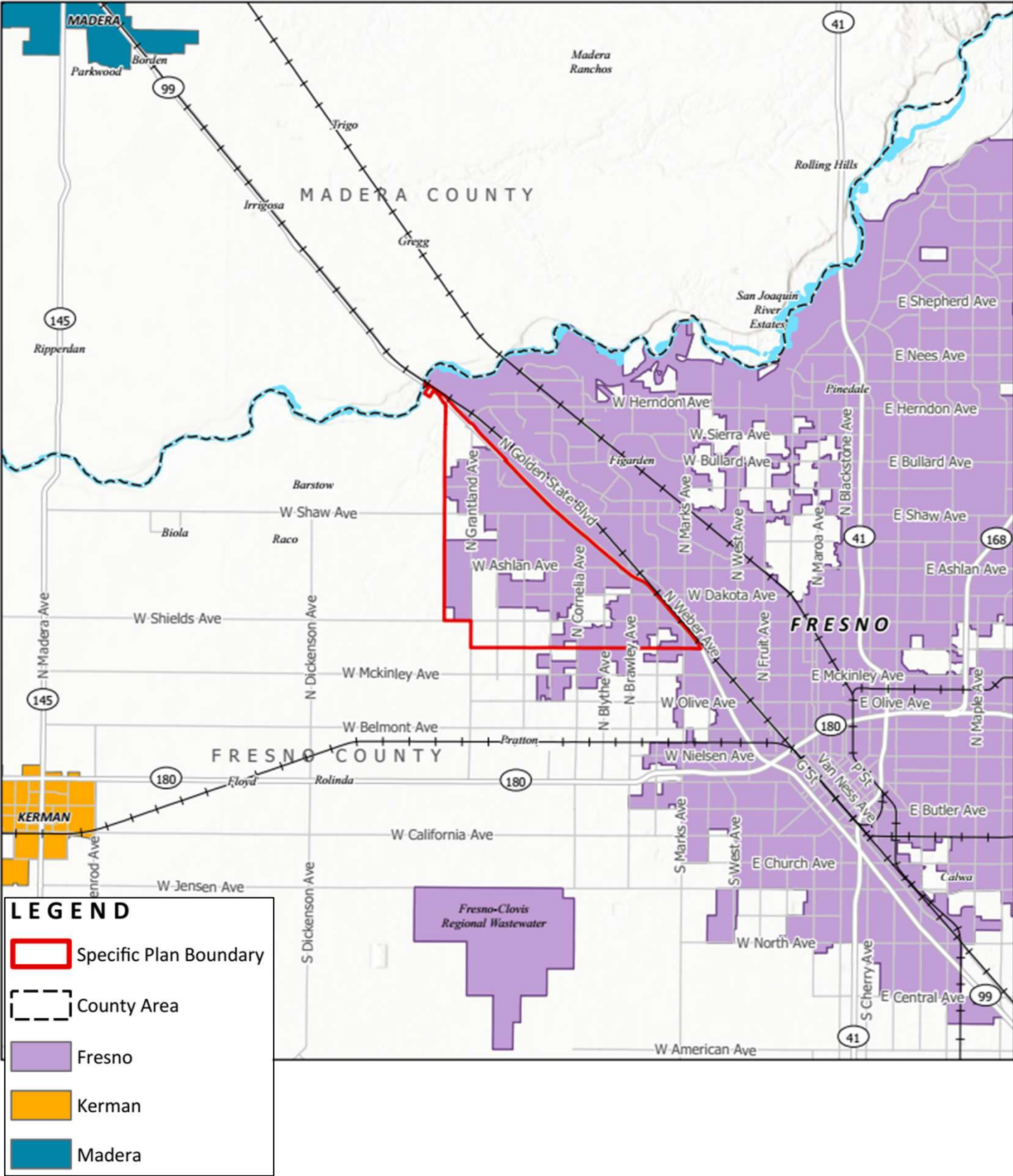
West Shaw Avenue Town Center: The West Shaw Avenue Town Center (the Town Center) will extend from State Route 99 to the east side of Grantland Avenue and is envisioned to be comprised of mixed-use development supported by enhanced transit service. Land on

the south side of West Shaw Avenue will provide additional neighborhood and commercial mixed-use opportunities.

Catalytic Corridors: The proposed Specific Plan designates higher density land uses along corridors for the purpose of providing easy access to major arterials and streets, retail centers, and community amenities. Catalytic corridors will include transit services. The corridors are designed to include neighborhood and pocket parks, commercial and retail uses, educational facilities, multi-family dwelling units, and professional offices. The corridors are located on the following streets:

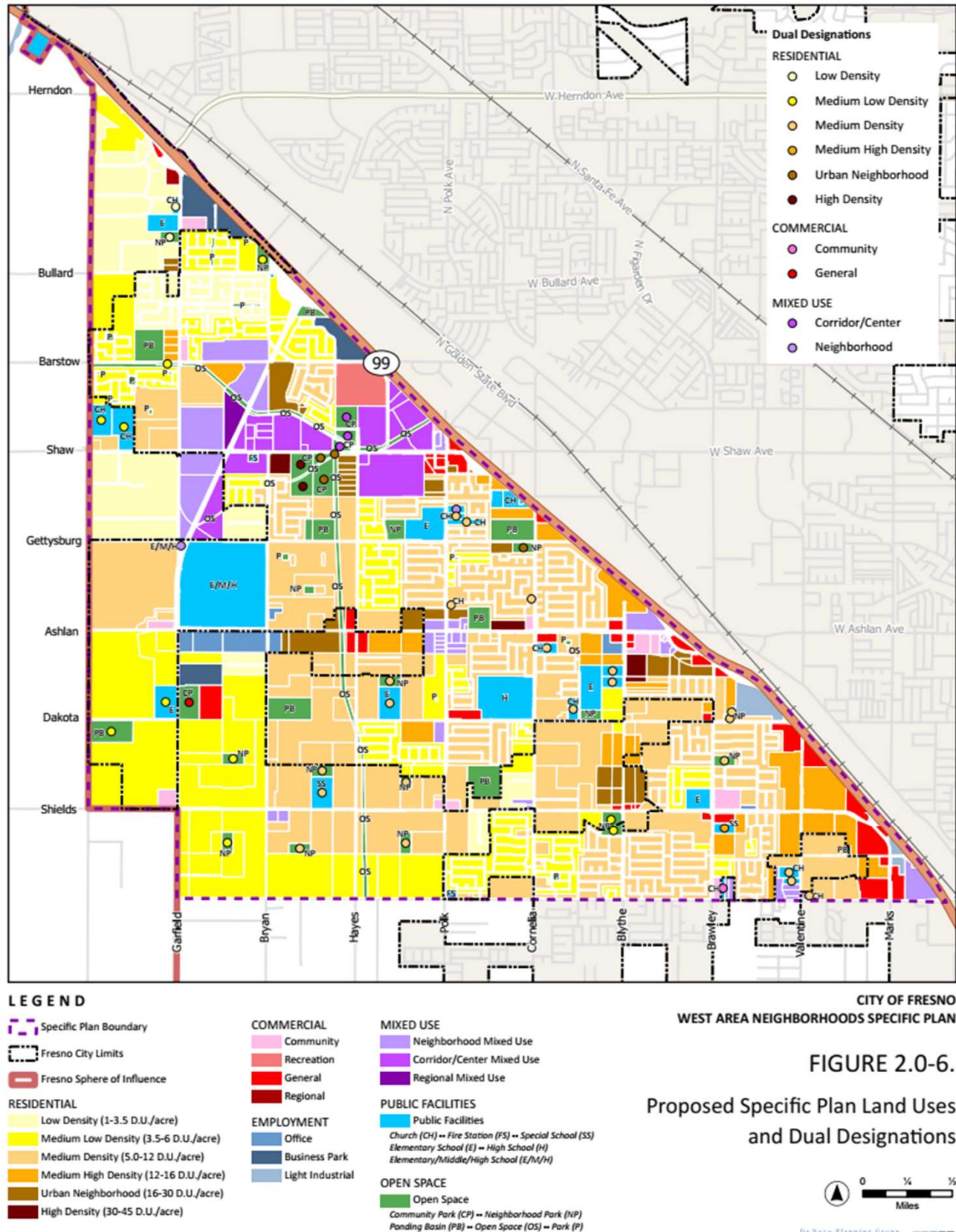
- a) West Shaw Avenue, from State Route 99 to Grantland Avenue;
- b) West Ashlan Avenue, from State Route 99 to Grantland Avenue;
- c) North Brawley Avenue, from West Clinton to West Ashlan Avenue;
- d) West Clinton Avenue from State Route 99 to North Brawley Avenue; and
- e) Veterans Boulevard, from West Gettysburg Avenue to West Barstow Avenue.

Exhibit A
Location Map



Sources: Fresno County; Madera County, Cal Atlas.
Map date: May 7, 2019. Revised May 29, 2020.

Exhibit B West Area Specific Plan Proposed Land Uses



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

2.1 Sound, Noise, and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting at 20 Hz to the high pitch of 20,000 Hz.

2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square meter ($\mu\text{N}/\text{m}^2$), also called micro-Pascal (μPa). One μPa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound. When combining sound levels, estimates shown in Table 1 may be utilized.

Table 1: Decibel Addition

When Two Decibel Values Differ by:	Add This Amount	Example
0 or 1 dB	3 dB	70+69=73 dB
2 or 3 dB	2 dB	74+71=76 dB
4 to 9 dB	1 dB	66+60=67 dB
10 dB or more	0 dB	65+55=65 dB

Source: Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol. Caltrans, 2013a

2.5 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, A-scale weighting is typically used and is reported in terms of the A-weighted decibel (dBA). The A-scale was designed to account for the frequency-dependent sensitivity of the human ear. Typical A-weighted noise levels are shown in Table 2.

Table 2: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor
	110	Rock Band
Jet flyover at 1,000 feet	100	
Gas lawnmower at 3 feet	90	
Diesel truck at 50 feet at 50 mph	80	Food blender at 3 feet
		Garbage disposal at 3 feet
Noisy urban area, daytime	70	Vacuum cleaner at 3 feet
Gas lawnmower, 100 feet		
Commercial area	60	Normal speech at 3 feet
Heavy traffic at 300 feet		
	50	Large Business Office
Quiet urban daytime		Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
	10	Broadcasting studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol. Caltrans, 2013a.

In general, the human ear can barely perceive a change in noise level of 3 dB. As shown in Table 3, a change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Table 3: Perceived Changes in Noise Levels

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud
Source: Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol. Caltrans, 2013a.	

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, and others are random. Some noise levels are constant, while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after the addition of ten (10) decibels to sound levels in the night between 10:00 PM and 7:00 AM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dBA: A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the California Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90, L99, etc.

Noise: Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dBA level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Tonal Sounds

A pure tone sound is a sound produced at or near a single frequency. Laboratory tests have shown the humans are more perceptible to changes in sound levels of a pure tone (Caltrans 1998). For a noise source to contain a "pure tone," there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to "stand out" against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by: 5 dB for center frequencies of 500 Hertz (Hz) and above; by 8 dB for center frequencies between 160 and 400 Hz; and by 15 dB for center frequencies of 125 Hz or less.

2.8 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The

sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity and turbulence can further impact how far sound can travel.

2.9 Ground Absorption

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt, or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact how far sound can travel.

2.10 Sound Attenuation

Noise-related land use issues are typically composed of three basic elements: (1) the noise source, (2) a transmission path, and (3) a receiver.

The appropriate acoustical treatment for a given project should consider the nature of the noise source and the sensitivity of the receiver. When the potential for a noise-related problem is present, either avoidance of the noise-related problem or noise control techniques should be selected to provide an acceptable noise environment for the receiver while remaining consistent with local aesthetic standards and practical structural and economic limits. Fundamental noise control options are described below.

2.10.1 Noise Barriers

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. For a noise barrier to work, it must be high enough and long enough to block the view of a road. A noise barrier is most effective when placed close to the noise source or receiver. A noise barrier can achieve a 5-dBA noise level reduction when it is tall enough to not allow a line-of-sight view of the road. When the noise barrier is an earthen berm instead of a wall, the noise attenuation can be increased by another 3 dBA.

2.10.2 Setbacks

Noise exposure may be reduced by increasing the setback distance between the noise source and the receiving use. Setback areas can take the form of open space, frontage roads, recreational areas, and storage yards. The available noise attenuation from this technique is limited by the characteristics of the noise source, but generally ranges between 4 and 6 dBA.

2.10.3 Site Design

Buildings can be placed on a property to shield other structures or areas affected by noise and to prevent an increase in noise levels caused by reflections. The use of one building to shield another can significantly reduce overall noise control costs, particularly if the shielding structure is insensitive to noise. An example would be placing a detached garage nearest the noise source to shield the house or backyard. Site design should guard against creating reflecting surfaces that may increase onsite noise levels. For example, two buildings placed at an angle facing a noise source may cause noise levels within that angle to increase by up to 3 dBA. The open end of U-shaped buildings should point away from noise sources for the same reason. Landscaping walls or noise barriers located within a development may inadvertently reflect noise back to a noise-sensitive area unless carefully located.

2.10.4 Building Facades

When interior noise levels are of concern in a noisy environment, noise reduction may be obtained through acoustical design of building facades. Standard construction practices provide a noise reduction of 10–15 dBA for building facades with open windows, and a noise reduction of approximately 25 dBA when windows are closed (Table 4). An exterior-to-interior noise reduction of 25 dBA can be obtained by requiring that building design include adequate ventilation systems, which would allow windows facing a noise source to remain closed, even during periods of excessively warm weather.

Where greater noise reduction is required, acoustical treatment of the building facade may be necessary. Reducing relative window area is the most effective control technique, followed by providing acoustical glazing (e.g., thicker glass or increased air space between panes) within frames with low air infiltration rates, using fixed (i.e., non-movable) acoustical glazing, or eliminating windows altogether. Noise transmitted through walls can be reduced by increasing wall mass (e.g., using stucco or brick in lieu of wood siding), or isolating wall members by using double or staggered stud walls, while noise transmitted through doorways can be lessened by reducing door area, using solid-core doors, or sealing door perimeters with suitable gaskets. Noise-reducing roof treatments include using plywood sheathing under roofing materials.

Table 4: Noise Reduction Afforded by Common Building Construction

Construction Type	Typical Occupancy	General Description	Range of Noise Reduction (dB) ¹
1	Residential, Commercial, Schools	Wood frame, stucco or wood sheathing exterior. Interior drywall or plaster. Sliding glass windows, with windows partially open.	15-20
2	Same as 1 above	Same as 1 above, but with windows closed.	25-30
3	Commercial, Schools	Same as 1 above, but with fixed 0.25-inch plate glass windows.	30-35
4	Commercial, Industrial	Steel or concrete frame, curtain wall, or masonry exterior wall. Fixed 0.25-inch plate glass windows.	35-40
Source: California Airport Land Use Planning Handbook, 2002.			

2.10.5 Landscaping

While the use of trees and other vegetation is often thought to provide significant noise attenuation, approximately 100 feet of dense foliage – with no visual path extending through the foliage – is required to achieve a 5-dBA attenuation of traffic noise. Thus, the use of vegetation as a noise barrier is not considered a practical method of noise control unless large tracts of dense foliage are part of the existing landscape.

Vegetation can be used, however, to acoustically “soften” intervening ground between a noise source and a receiver, increasing ground absorption of sound, and thus, increasing the attenuation of sound with distance. Planting trees and shrubs also offers aesthetic and psychological value, and it may reduce adverse public reaction to a noise source by removing the source from view, even though noise levels would be largely unaffected.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

3.3 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be

effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed Project is located in the City of Fresno, and noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

4.1.1 Noise Control Act of 1972

The Federal Office of Noise Abatement and Control (ONAC) was originally tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows:

- The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies.
- The Federal Aviation Agency (FAA) regulates noise from aircraft and airports.
- The Federal Highway Administration (FHWA) regulates noise from the interstate highway system.
- The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement Codes and land use planning.

The intent of a General Plan Noise Element or Section is to set goals to limit and reduce the effects of noise intrusion and to set acceptable noise levels for varying types of land uses. To this end, the City has the authority to set land use noise standards and restrict private activities that generate excessive or intrusive noise. However, it should be recognized that the City does not have the authority to regulate all sources of noise within the City and various other agencies may supersede City authority. The following is a summary of some federal agency requirements that apply to noise within the Project Area.

4.1.2 Federal Highway Administration

Federal Highway Administration State routes and freeways that run through the City are subject to Federal funding and, as such, are under the purview of the Federal Highway Administration (FHWA). The FHWA has developed noise standards that are typically used for Federally funded roadway projects or projects that require either Federal or Caltrans review. These noise standards are based on Leq and L10 values and are included in Table 5, FHWA Design Noise Levels.

Table 5: FHWA Design Noise Levels

Activity Category	Description of Category	Design Noise Levels ¹	
		Leq (dBA)	L10 (dBA)
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Examples include natural parks or wildlife habitats.	57 (exterior)	60 (exterior)
B	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.	67 (exterior)	70 (exterior)
C	Developed lands, properties, or activities not included in Categories A or B, above.	72 (exterior)	75 (exterior)
D	Undeveloped lands.		
E	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.	52 (interior)	55 (interior)
Source: FHWA Noise Standard. 23 Code of Federal Regulations 772.			
Notes: Either Leq or L10 (but not both) design noise levels may be used on a project.			

U.S. Department of Housing and Urban Development

The Department of Housing and Urban Development (HUD) issues formal requirements related specifically to standards for exterior noise levels along with policies for approving HUD-supported or assisted housing projects in high-noise areas. In general, these requirements established three zones. These include:

- 65 dBA Ldn or less - an acceptable zone where all projects could be approved,
- Exceeding 65 dBA Ldn but not exceeding 75 dBA Ldn - a normally unacceptable zone where mitigation measures would be required, and each Project would have to be individually evaluated for approval or denial. These measures must provide 5 dBA of attenuation above the attenuation provided by standard construction required in a 65 to 70 dBA Ldn area and 10 dBA of attenuation in a 70 to 75 dBA Ldn area, and
- Exceeding 75 dBA Ldn - an unacceptable zone in which projects would not, as a rule, be approved.

4.1.3 The Federal Interagency Committee on Noise

The Federal Interagency Committee on Noise (FICON) developed guidance for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies of the percentage of persons highly annoyed by aircraft noise. These recommendations are often used for different types of environmental noise such as traffic noise. A readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact

when the noise criteria for a given land use is exceeded. In areas where the existing noise levels range from 60 to 65 dBA Ldn, a 3 dBA barely perceptible noise level increase is considered significant. When the existing noise levels already exceed 65 dBA Ldn, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact since it likely contributes to an existing noise exposure exceedance.

4.2 State Regulations

4.2.1 California Department of Health Services

The California Department of Health Services (DHS) Office of Noise Control studied the correlation between noise levels and their effects on various land uses. As a result, the DHS established four categories for judging the severity of noise intrusion on specified land uses. These categories are presented in the State Land Use Compatibility for Community Noise Exposure table (California Office of Noise Control, 2017).

4.2.2 The California Building Code

Section 1206.4 of the 2022 California Building Code (Cal. Code Regs., Title 24, Part 2), Chapter 12 (Interior Environment), establishes an interior noise criterion of 45 dBA CNEL in any habitable room. Per California Building Code, Chapter 2 (Definitions), a habitable space is a space in a building for living, sleeping, eating, or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces, and similar areas are not considered habitable spaces. This section applies to dwelling and sleeping units.

4.2.3 California Green Building Standards Code

California Green Building Standards Code (2022), Chapter 5 (Non-residential Mandatory Measures) Section 5.507.4 (Acoustical Control), applies to all proposed buildings that people may occupy but are not residential dwelling units, with the exception of factories, stadiums, storage, enclosed parking structures, and utility buildings.

Buildings must comply with Section 5.507.4.1 or Section 5.507.4.2. Section 5.507.4.1 requires wall and roof-ceiling assemblies exposed to the noise source making up the building, or addition envelope or altered envelope, shall meet a composite Sound Transmission Class (STC) rating of at least 50 or a composite Outdoor to Indoor Transmission Class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when within the 65 CNEL noise contour of an airport, freeway, expressway, railroad, industrial source, or fixed-guideway source. If contours are not available, buildings exposed to 65 dB Leq(h) must meet a composite STC rating of at least 45 or OITC of 35 with exterior windows of at least STC 40 or OITC 30. Section 5.507.4.2 requires that the interior noise attributable to exterior sources must not exceed 50 dBA Leq(h) during any hour of operation. Section 5.507.4.3 requires that assemblies separating tenant spaces from tenant spaces or public places must have an STC of at least 40.

4.3 City of Fresno

Existing planning policies and noise regulations applicable to noise within the City of Fresno are presented in the Noise Element of the City of Fresno General Plan and within the City of Fresno Municipal Code. Applicable goals, policies, and regulations are presented below.

4.3.1 City of Fresno General Plan

The City of Fresno General Plan Noise Element sets forth noise standards for transportation noise sources. Ideally, proposed land uses would be developed in areas where future noise levels due to transportation noise sources (except aircraft) would not exceed those presented in Table 6.

Table 6: Transportation (Non-Aircraft Noise Sources)

Noise Sensitive Land Use	Outdoor Activity Areas ¹⁻³	Interior Spaces	
	Ldn/CNEL, dB	Ldn/CNEL, dB	Leq dB ²
Residential	65	45	-
Transient Lodging	65	45	-
Hospitals, Nursing Homes	65	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65	-	45
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

Source: City of Fresno General Plan Noise Element Table 9-2, 2014.

Notes:

1. Where the location of outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
2. Excludes front or side yard areas, and front or side porches. Balconies or roof decks facing front and side yards shall be included in designated areas to be protected from noise where these spaces are used to calculate compliance with required outdoor living area as required by adopted development standards.
3. Residential and noise sensitive uses located along Bus Rapid Transit corridors or within Activity Centers as identified in the City of Fresno General Plan, are exempt from exterior noise standards where it is determined application of noise mitigation measures will be detrimental to the realization of the General Plan's mixed use policies. Interior noise level standards shall still apply.
4. As determined for a typical worst-case hour during periods of use.

The City of Fresno General Plan Noise Element also includes standards for stationary noise sources to regulate noise emanating from one property to another. Stationary Noise Standards are presented in Table 7.

Table 7: Stationary Noise Source Standards

	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
Hourly Equivalent Sound Level (Leq), dBA	50	45
Maximum Sound Level (Lmax), dBA	70	60
Notes: 1. The Department of Development and Resource Management Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise-sensitive, and may require appropriate noise mitigation measures. 2. As determined at outdoor activity areas. Where the location of outdoor activity areas is unknown or not applicable, the noise exposure standard shall be applied at the property line of the receiving land use. When ambient noise levels exceed or equal the levels in this table, mitigation shall only be required to limit noise to the ambient plus five dBA.		

In addition to the noise guidelines presented above in Tables 6 and 7, the City has adopted Objectives and Policies as part of their General Plan to minimize noise impacts in the community, as follows.

NS-1 Protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.

NS-1-a Desirable and Generally Acceptable Exterior Noise Environment.

Establish 65 dBA Ldn or CNEL as the standard for the desirable maximum average exterior noise levels for defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dBA Ldn or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise sensitive uses. Maintain 65 dBA Ldn or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA Ldn or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.

Commentary: The Noise Ordinance will define usable exterior areas for single family and multiple family residential and noise sensitive uses to include rear yards and other outdoor areas intended to accommodate leisure or active use, excluding front or side yard areas, and front or side porches. Balconies or roof decks facing front and side yards shall be included in designated areas to be protected from noise where these spaces are used to calculate compliance with required outdoor living area as required by adopted development standards.

NS-1-b Conditionally Acceptable Exterior Noise Exposure Range.

Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dB Ldn or require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 9-2 (Table 6 in this report).

NS-1-c Generally Unacceptable Exterior Noise Exposure Range.

Establish the exterior noise exposure of greater than 65 dB Ldn or CNEL to be generally unacceptable for residential and other noise sensitive uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise

reducing mitigation measures as determined by a site specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dB interior noise level standards set in Table 9-2 (Table 6 in this report) as conditions of permit approval.

NS-1-d Allowable Exterior Noise Environment for Bus Rapid Transit and Activity Centers.

Exclude residential and noise sensitive uses located along Bus Rapid Transit corridors or within Activity Centers identified by this General Plan, from exterior noise standards in Policies NS-1-a through NS-1-c where it is determined application of noise mitigation measures will be detrimental to the realization of the General Plan's mixed use policies.

Commentary: Interior noise level standards of Table 9-2 (Table 6 in this report) will still apply.

NS-1-e Update Noise Ordinance.

Update the Noise Ordinance to ensure that noise exposure information and specific standards for both exterior and interior noise and measurement criteria are consistent with this General Plan and changing conditions within the city and with noise control regulations or policies enacted after the adoption of this element.

NS-1-f Performance Standards.

Implement performance standards for noise reduction for new residential and noise sensitive uses exposed to exterior community noise levels from transportation sources above 65 dB Ldn or CNEL, as shown on Exhibit NS-3: Future Noise Contours, or as identified by a project-specific acoustical analysis based on the target acceptable noise levels set in Table 9-2 (Table 6 in this report) and Policies NS-1-a through NS-1-c.

NS-1-g Noise Mitigation Measures.

Noise mitigation measures which help achieve the noise level targets of this plan include, but are not limited to, the following:

- Façades with substantial weight and insulation;
- Installation of sound-rated windows for primary sleeping and activity areas;
- Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas;
- Greater building setbacks and exterior barriers;
- Acoustic baffling of vents for chimneys, attic and gable ends;
- Installation of mechanical ventilation systems that provide fresh air under closed window conditions.

The aforementioned measures are not exhaustive and alternative designs may be approved by the City, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

NS-1-h Interior Noise Level Requirement.

Comply with the State Code requirement that any new multifamily residential, hotel, or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dB Ldn interior noise criterion, and apply this standard as well to all new single-family residential and noise sensitive uses.

NS-1-i Mitigation by New Development.

Require an acoustical analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by Tables 9-2 and 9-3 (Tables 6 and 7 in this report) to determine impacts, and require developers to mitigate these impacts in conformance Tables 6 and 7 in this report as a condition of permit approval through appropriate means. Noise mitigation measures may include:

- The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;
- Providing increased setbacks for noise sources from adjacent dwellings;
- Installation of walls and landscaping that serve as noise buffers;
- Installation of soundproofing materials and double-glazed windows; and
- Regulating operations, such as hours of operation, including deliveries and trash pickup.

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified acoustical consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.

NS-1-j Significance Threshold.

Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dB Ldn or CNEL or more above the ambient noise limits established in this General Plan Update.

Commentary: When an increase in noise would result in a “significant” impact (increase of three dBA or more) to residents or businesses, then noise mitigation would be required to reduce noise exposure. If the increase in noise is less than three dBA, then the noise impact is considered insignificant and no noise mitigation is needed.

By setting a specific threshold of significance in the General Plan, this policy facilitates making a determination of environmental impact, as required by the California Environmental Quality Act. It helps the City determine whether (1) the potential impact of a development project on the noise environment warrants mitigation, or (2) a statement of overriding considerations will be required.

NS-1-k Proposal Review.

Review all new public and private development proposals that may potentially be affected by or cause a significant increase in noise levels, per Policy NS-1-i, to determine conformance with the policies of this Noise Element. Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.

NS-1-l Enforcement.

Continue to enforce applicable State Noise Insulation Standards and Uniform Building Code noise requirements, as adopted by the City.

NS-1-m Transportation Related Noise Impacts.

For projects subject to City approval, require that the project sponsor mitigate noise created by new transportation and transportation-related stationary noise sources, including roadway improvement projects, so that resulting noise levels do not exceed the City's adopted standards for noise sensitive land uses.

NS-1-n Best Available Technology.

Require new noise sources to use best available control technology to minimize noise emissions.

Commentary: Noise from mechanical equipment can be reduced by soundproofing materials and sound-deadening installation; controlling hours of operation will also reduce noise impacts during the morning or evening.

NS-1-o Sound Wall Guidelines.

Acoustical studies and noise mitigation measures for projects shall specify the heights, materials, and design for sound walls and other noise barriers. Aesthetic considerations shall also be addressed in these studies and mitigation measures such as variable noise barrier heights, a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise source and noise receptor, with a maximum allowable height of 15 feet. The City will develop guidelines for aesthetic design measures of sound walls, and may commission area wide noise mitigation studies that can serve as templates for acoustical treatment that can be applied to similar situations in the urban area.

Commentary: While acoustical studies need to be site-specific in order to appropriately assess particular settings, having prototypical design measures and noise control templates that can be applied for similar situations and contexts can facilitate infill and other development. These can be provided in this noise report and carried forward into the Specific Plan.

NS-1-p Airport Noise Compatibility.

Implement the land use and noise exposure compatibility provisions of the adopted Fresno Yosemite International Airport Land Use Compatibility Plan, the Fresno Chandler Executive Airport Master and Environs Specific Plan, and the Sierra Sky Park Land Use Policy Plan to assess noise compatibility of proposed uses and improvements within airport influence and environs areas.

4.3.2 West Area Community Plan

The City of Fresno is divided into nine community planning areas. The project site is within the West Area Community Plan Area. The West Area Community Plan includes a few land use related policies that encourage good design and avoidance of potential noise issues. These policies are presented below.

W-7-e. Policy: All loading spaces shall be located not less than 150 feet from the boundary of any residential property; however, the proximity of loading areas may be reduced when adequate design and operational measures (such as restricted hours for loading activities) are approved to mitigate noise, lights, and other nuisances associated with loading areas, in order to protect adjacent residential uses. In all cases, loading areas shall be screened from view of adjoining property zoned, planned, or approved for residential uses. This screening shall be accomplished by either placing loading docks and areas on the sides of buildings that face away from residential property, or by a combination of landscape planting and a solid masonry wall. Where possible, loading areas should not be visible from, nor take access from, local streets with residential frontage.

W-7-f. Policy: Roof-mounted and detached mechanical equipment for commercial and office uses should be screened from view of adjacent residential areas, and acoustically baffled to prevent the noise level rating for the equipment from exceeding the applicable city standard for ambient noise at residential property lines.

4.3.3 City of Fresno Noise Ordinance

The City of Fresno has adopted several ordinances to regulate unwanted sounds. Those applicable to this analysis are presented below.

SEC. 10-102. Definitions.

- (b) Ambient Noise. “Ambient noise” is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than what is presented in Table 8 for the applicable type of land use, the sound level presented in Table 8, shall be deemed to be the ambient noise level for that location.

<Table 8, next page>

Table 8: Ambient Noise

District	Time	Sound Level Decibels
Residential	10:00 PM to 7:00 AM	50
	7:00 PM to 10:00 PM	55
	7:00 AM to 7:00 PM	60
Commercial	10:00 PM-7:00 AM	60
	7:00 AM to 10:00 PM	65
Industrial	Anytime	70
Source: Fresno Municipal Code Section 10-102(b)		

Section 10-105. Excessive Noise Prohibited. No person shall make, cause, or suffer or permit to be made or caused upon any premises or upon any public street, alley, or place within the city, any sound or noise which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing or working in the area, unless such noise or sound is specifically authorized by or in accordance with this article. The provisions of this section shall apply to, but shall be limited to, the control, use, and operation of the following noise sources:

- (a) Radios, musical instruments, phonographs, television sets, or other machines or devices used for the amplification, production, or reproduction of sound or the human voice.
- (b) Animals or fowl creating, generating, or emitting any cry or behavioral sound.
- (c) Machinery or equipment, such as fans, pumps, air conditioning units, engines, turbines, compressors, generators, motors or similar devices, equipment, or apparatus.
- (d) Construction equipment or work, including the operation, use or employment of pile drivers, hammers, saws, drills, derricks, hoists, or similar construction equipment or tools.

Section 10-107. School, Hospitals, and Churches. No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use, or adjacent to any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such street, sidewalk, or public place indicating the presence of a school, church, or hospital.

Section 10-109. Exceptions. The provisions of this article shall not apply to:

- (a) Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.
- (b) Emergency work.
- (c) Any act or acts which are prohibited by any law of the State of California or the United States.

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

MD conducted the sound level measurements in accordance to the City and Caltrans technical noise specifications. All measurements equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a wind screen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 SoundPLAN Noise Modeling

SoundPLAN acoustical modeling software was utilized to create existing and cumulative plus project traffic noise level contours for all General Plan designated roadways. Model parameters included average daily traffic volumes, day/evening/night split, roadway classification, width, speed, and truck mix. Surfaces adjacent to all modeled roadways were assumed to have a “hard site” to predict worst-case, conservative noise levels. A hard site, such as pavement, is highly reflective and does not attenuate noise as quickly as grass or other soft sites. Possible reductions in noise levels due to intervening topography and buildings were not accounted for in this analysis. Roadway modeling assumptions utilized for the technical study are provided in Table 9 (Roadway Segment Modeling Assumptions) and Table 10 (Vehicle Mix Data) and in Appendix A.

A summary of the model parameters and REMEL adjustments are presented below.

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour through-out a 24-hour period

Rail noise was modeled using the Create Freight Noise and Vibration Model/Spreadsheet. CREATE assumptions include one rail yard, two locomotives per train, 43,100 feet of rail cars, and an average speed of 45 mph. Current data shows that approximately 14 trains travel along this rail line during each 24-hour period. The Create Noise Model output was entered into the SoundPLAN noise model as a line source. SoundPLAN input and output is provided in Appendix A.

5.3 FHWA Traffic Noise Prediction Model

The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) was utilized to model and to compare existing traffic noise levels to cumulative plus project traffic noise levels. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway modeling assumptions utilized for the technical study are provided in Table 9, and Table 10 indicates the vehicle distribution utilized for this study.

<Tables 9 and 10, next page>

Table 9: Roadway Segment Modeling Assumptions

Roadway	Segment Limits	Existing ADT ^{1,2}	Cumulative Plus Project ADT ^{1,2}	Speed ³	West Area Plan Designation ⁴
State Route 99 ⁵	W Herndon Ave to W Shaw Ave	81,000	81,000	65	Freeway
State Route 99 ⁵	W Shaw Ave to W Ashlan Ave	77,000	77,000	65	Freeway
State Route 99 ⁵	W Ashlan Ave to W Dakota Ave	105,000	105,000	65	Freeway
State Route 99 ⁵	W Dakota Ave to W Shields Ave	104,000	104,000	65	Freeway
State Route 99 ⁵	W Shields Ave to W Clinton Ave	107,000	107,000	45	Freeway
W Herndon Ave	N. Garfield Ave to N Parkway Drive	No Data	3,713	35	Collector
W Bullard Ave	N Garfield Ave to N Grantland Ave	600	592	35	Collector
W Bullard Ave	N Grantland Ave to N Bryan Ave	2,900	7,353	35	Collector
W Barstow Ave	N Garfield to N Grantland Ave	1,200	140	45	Collector
W Barstow Ave	N Grantland Ave to N Bryan Ave	800	15,012	35	Collector
W Barstow Ave	N Bryan Ave to N Contessa Ave	No Data	13,278	50	Collector
W Shaw Ave	N Garfield Ave to N Grantland Ave	6,000	14,066	35	Arterial
W Shaw Ave	N Grantland Ave to N Bryan Ave	7,000	31,351	35	Arterial
W Shaw Ave	N Bryan Ave to N Hayes Ave	8,250	79,020	35	Arterial
W Shaw Ave	N Hayes Ave to N Polk Ave	9,200	97,620	45	Arterial
W Shaw Ave	N Polk Ave to State Route 99	18,200	176,754	45	Arterial
W Gettysburg Ave	N Bryan Ave to N Hayes Ave	1,700	12,922	35	Collector
W Gettysburg Ave	N Hayes Ave to N Polk Ave	1,950	16,304	35	Collector
W Gettysburg Ave	N Polk Ave to N Barcus	1,200	9,499	45	Collector
W Ashlan Ave	N. Garfield to N Grantland	No Data	2,775	45	Collector
W Ashlan Ave	N Grantland Ave to N Bryan Ave	3,200	2,775	45	Arterial
W Ashlan Ave	N Bryan Ave to N Hayes Ave	3,100	21,082	35	Arterial
W Ashlan Ave	N Hayes Ave to N Polk Ave	2,050	39,954	35	Arterial
W Ashlan Ave	N Polk Ave to N Cornelia Ave	6,500	41,067	35	Arterial
W Ashlan Ave	N Cornelia Ave to N Blythe Ave	16,350	50,593	35	Arterial
W Ashlan Ave	N Blythe Ave to State Route 99	23,600	45,152	35	Arterial
W Dakota Ave	N Bryan Ave to N Hayes Ave	No Data	7,996	35	Collector
W Dakota Ave	N Hayes Ave to N Polk Ave	1,950	19,386	35	Collector
W Dakota Ave	N Polk Ave to N Cornelia Ave	5,100	14,354	35	Collector
W Dakota Ave	N Cornelia Ave to N Blythe Ave	4,250	12,010	35	Collector
W Dakota Ave	N Blythe Ave to N Brawley Ave	3,150	8,465	35	Collector
W Dakota Ave	N Brawley Ave to Valentine	2,400	5,401	35	Collector
W Shields Ave	N. Garfield Ave to Grantland Ave	2,700	8,283	35	Collector
W Shields Ave	N Grantland Ave to N Bryan Ave	2,750	12,907	35	Collector
W Shields Ave	N Bryan Ave to N Hayes Ave	3,550	15,154	35	Collector
W Shields Ave	N Hayes Ave to N Polk Ave	3,250	10,917	35	Collector

Table 9: Roadway Segment Modeling Assumptions

Roadway	Segment Limits	Existing ADT ^{1,2}	Cumulative Plus Project ADT ^{1,2}	Speed ³	West Area Plan Designation ⁴
W Shields Ave	N Polk Ave to N Cornelia Ave	3,750	16,626	45	Collector
W Shields Ave	N Cornelia Ave to N Blythe Ave	4,600	16,727	35	Collector
W Shields Ave	N Blythe Ave to N Brawley Ave	4,400	16,464	35	Collector
W Shields Ave	N Brawley Ave to N Valentine Ave	5,800	19,201	35	Collector
W Shields Ave	N Valentine Ave to N Marks Ave	6,900	13,532	35	Collector
W Clinton Ave	N Grantland Ave to N Bryan Ave	400	2,124	35	Arterial
W Clinton Ave	N Bryan Ave to N Hayes Ave	700	5,144	35	Arterial
W Clinton Ave	N Hayes Ave to N Polk Ave	1,050	11,798	35	Arterial
W Clinton Ave	N Polk Ave to N Cornelia Ave	3,400	11,985	45	Arterial
W Clinton Ave	N Cornelia Ave to N Blythe Ave	6,400	14,454	50	Arterial
W Clinton Ave	N Blythe Ave to N Brawley Ave	9,300	18,766	50	Arterial
W Clinton Ave	N Brawley Ave to N Valentine Ave	9,850	26,060	45	Arterial
W Clinton Ave	N Valentine Ave to N Marks Ave	11,300	36,347	45	Arterial
W Clinton Ave	N Marks Ave to W Vassar Ave	20,000	60,356	50	Arterial
N Garfield Ave	W Herndon Ave to W Bullard Ave	No Data	3,530	35	Arterial
N Garfield Ave	W Bullard Ave to W Barstow Ave	No Data	4,086	35	Arterial
N Garfield Ave	W Barstow Ave to W Shaw Ave	No Data	3,949	45	Arterial
N Garfield Ave	W Shaw Ave to W Gettysburg Ave	No Data	4,657	35	Arterial
N Garfield Ave	W Gettysburg Ave to W Ashlan Ave	No Data	4,210	35	Arterial
N Garfield Ave	W Dakota Ave to W Shields Ave	No Data	3,783	35	Arterial
N Parkway Drive	N Herndon Ave to W Herndon Ave	No Data	3,713	35	Arterial
N Grantland Ave	N Parkway Drive to W Bullard Ave	10,500	12,669	35	Collector
N Grantland Ave	W Bullard Ave to W Barstow Ave	7,600	13,531	45	Arterial
N Grantland Ave	W Barstow Ave to W Shaw Ave	6,800	12,849	45	Arterial
N Grantland Ave	W Shaw Ave to W Gettysburg Ave	3,900	26,933	35	Arterial
N Grantland Ave	W Gettysburg Ave to W Ashlan Ave	4,000	46,307	45	Arterial
N Grantland Ave	W Ashlan Ave to W Dakota Ave	3,050	33,265	45	Arterial
N Grantland Ave	W Dakota Ave to W Shields Ave	No Data	42,569	45	Arterial
N Grantland Ave	W Shields Ave to W Clinton Ave	2,300	30,769	45	Arterial
N Bryan Ave	W Bullard Ave to W Barstow Ave	No Data	24,388	35	Collector
N Bryan Ave	W Barstow Ave to W Shaw Ave	No Data	22,709	35	Collector
N Bryan Ave	W Shaw Ave to W Gettysburg Ave	2,400	24,817	35	Collector
N Bryan Ave	W Gettysburg Ave to W Ashlan Ave	3,100	22,497	45	Collector
N Bryan Ave	W Ashlan Ave to W Dakota Ave	1,750	18,417	45	Collector
N Bryan Ave	W Dakota Ave to W Shields Ave	1,750	10,307	35	Collector
N Bryan Ave	W Shields Ave to W Clinton Ave	650	7,074	35	Collector

Table 9: Roadway Segment Modeling Assumptions

Roadway	Segment Limits	Existing ADT ^{1,2}	Cumulative Plus Project ADT ^{1,2}	Speed ³	West Area Plan Designation ⁴
N Hayes Ave	W. Santa Ana Ave to W Gettysburg Ave	2,700	23,694	45	Collector
N Hayes Ave	W Gettysburg Ave to W Ashlan Ave	1,700	26,863	45	Collector
N Hayes Ave	W Ashlan Ave to W Dakota Ave	2,400	20,616	35	Collector
N Hayes Ave	W Dakota Ave to W Shields Ave	2,150	19,836	35	Collector
N Hayes Ave	W Shields Ave to W Clinton Ave	1,650	17,788	35	Collector
N Polk Ave	W Shaw Ave to W Gettysburg Ave	7,300	34,394	45	Arterial
N Polk Ave	W Gettysburg Ave to W Ashlan Ave	4,850	36,282	35	Arterial
N Polk Ave	W Ashland Ave to W Dakota Ave	5,600	28,081	35	Arterial
N Polk Ave	W Dakota Ave to W Shields Ave	4,900	21,231	35	Arterial
N Polk Ave	W Shields Ave to W Clinton Ave	3,750	19,507	35	Arterial
N Cornelia Ave	N Parkway Drive to W Gettysburg Ave	5,700	10,112	45	Collector
N Cornelia Ave	W Gettysburg to W Ashlan Ave	5,700	18,875	45	Collector
N Cornelia Ave	W Ashland Ave to W Dakota Ave	7,800	13,343	45	Collector
N Cornelia Ave	W Dakota Ave to W Shields Ave	5,800	10,692	35	Collector
N Cornelia Ave	W Shields Ave to W Clinton Ave	5,600	11,959	45	Collector
N Blythe Ave	W Ashlan Ave to W Dakota Ave	6,700	13,397	35	Arterial
N Blythe Ave	W Dakota Ave to W Shields Ave	4,750	8,224	35	Collector
N Blythe Ave	W Shields Ave to W Clinton Ave	4,900	6,002	35	Collector
N Brawley Ave	N Parkway Drive to W Dakota Ave	6,600	26,713	35	Collector
N Brawley Ave	W Dakota Ave to W Shields Ave	6,350	22,250	35	Collector
N Brawley Ave	W Shields Ave to W Clinton Ave	6,000	17,691	45	Collector
N Valentine Ave	N Parkway Drive to W Shields Ave	2,600	10,900	35	Collector
N Valentine Ave	W Shields Ave to W Clinton Ave	2,100	9,677	35	Collector

Notes:

1) Traffic Study for the West Area Specific Plan, Kittleson Associates, 2020 & 2024.

2) Traffic volumes and vehicle mix for 2019 State Route 99 source: <https://dot.ca.gov/programs/traffic-operations/census>. Arterial and Collector percentages from the City of Fresno General Plan EIR.

3) Speed was modeled as posted.

4) West Area Planned Circulation Network, City of Fresno West Area Specific Plan Existing Conditions Report, March 2018.

5) State Route 99 included for noise contour modeling only and is not analyzed for significance.

Table 10: Vehicle Mix Data

Motor-Vehicle Type ^{1,2}	Daytime % (7AM to 7 PM)	Evening % (7 PM to 10 PM)	Night % (10 PM to 7 AM)	Total % of Traffic Flow
Freeway				
Automobiles	69.2%	14.2%	16.6%	77.0%
Medium Trucks	59.2%	10.8%	29.5%	4.8%
Heavy Trucks	54.8%	5.2%	40.0%	18.2%
Collector				
Automobiles	77.0%	12.8%	10.1%	94.39%
Medium Trucks	84.6%	9.3%	6.3%	4.92%
Heavy Trucks	33.0%	66.7%	0.2%	0.69%
Arterial				
Automobiles	78.5%	10.9%	10.7%	93.40%
Medium Trucks	84.0%	9.4%	9.4%	3.20%
Heavy Trucks	85.3%	5.9%	8.8%	3.40%
Notes: ¹ Vehicle mix for State Route 99 source (2019): https://dot.ca.gov/programs/traffic-operations/census ² Vehicle mix data for collector and arterial road types taken from the General Plan EIR.				

6.0 Existing Noise Environment

6.1 Noise Sources in the Plan Area

6.1.1 General Land Use Noise

Existing land uses within the Plan Area include single and multiple family residential development, commercial, recreational, and industrial land uses. Noise sources associated with existing land uses include residential maintenance, parking lot noise, heating and cooling system (HVAC) noise, property maintenance noise, trash truck noise, loading and unloading noise, and recreational noise.

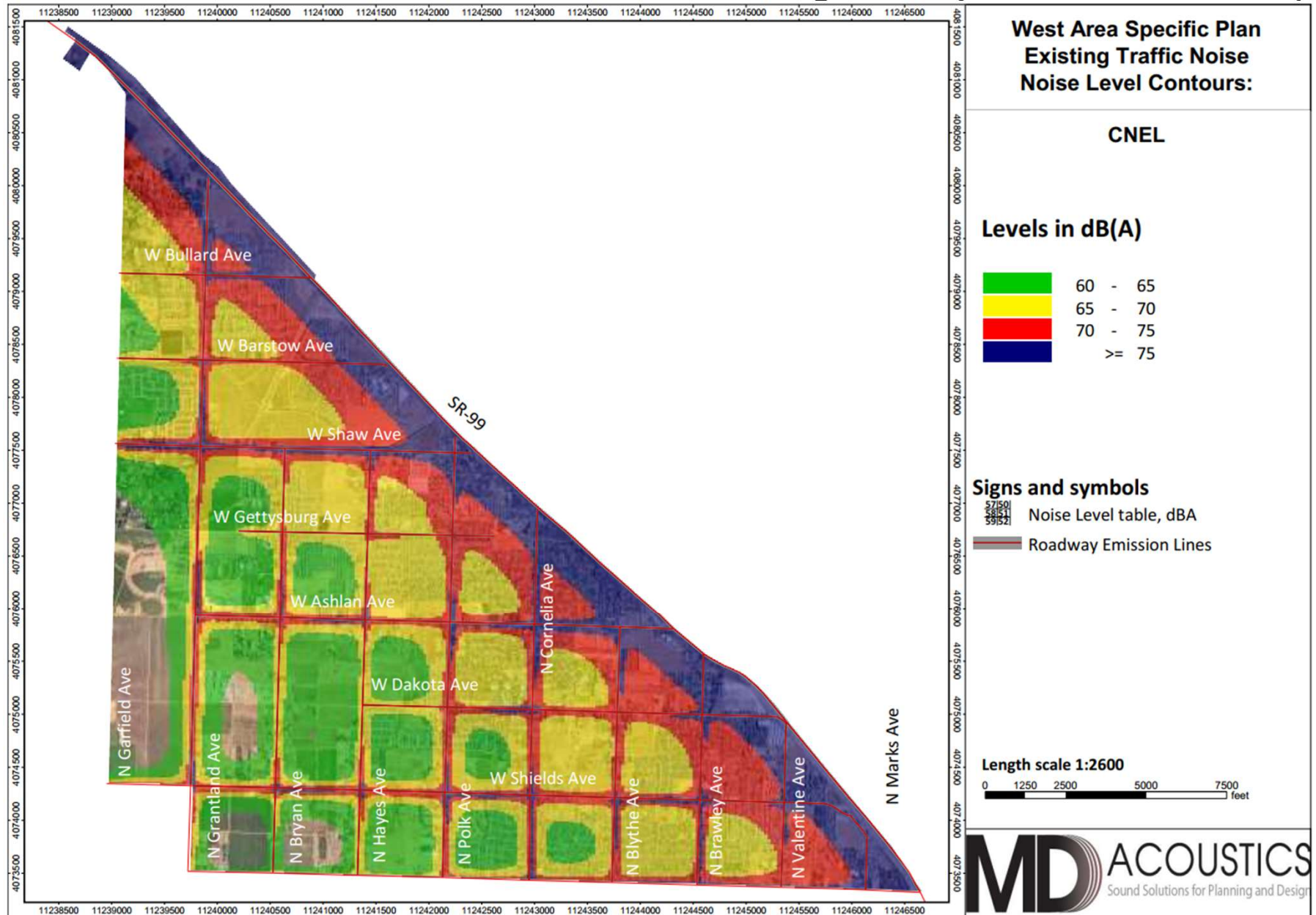
6.1.2 Roadway Noise

The primary noise source in the community is vehicle traffic traveling on surface streets and on State Route 99. Exhibit C shows existing modeled and measured noise levels associated with acoustically significant roadways within the Plan Area. The modeled noise levels do not take into account factors such as existing buildings, walls, etc., that may reduce or, in some cases, amplify noise sources. The measured noise levels do take into account existing structures as well as other noise sources.

Those areas in the City that currently experience sound levels greater than 65 dBA CNEL are typically near major vehicular traffic corridors. Highway traffic noise levels typically depend on three factors: (1) the volume of traffic, (2) the average speed of traffic, and (3) the vehicle mix (i.e., the percentage of trucks versus automobiles in the traffic flow). Vehicle noise includes noises produced by the engine, exhaust, tires, and wind generated by taller vehicles. Other factors that affect the perception of traffic noise include the distance from the highway, terrain, vegetation, and natural and structural obstacles. While tire noise from automobiles is generally located at ground level, some truck noise sources may emanate from 12 feet or more above the ground.

Vehicle traffic generated noise associated with State Route 99 is the dominant noise source in the eastern portion of the Plan Area, with average daily vehicle trips (ADTs) ranging between 85,000-117,000 adjacent to the Plan Area. Existing modeled noise contours shown in Exhibit C show that traffic noise associated with SR-99 dominates the noise environment of the easternmost portion of the Plan Area. Most noise-sensitive land uses adjacent to State Route 99 are shielded by existing sound walls, topography, or buildings. However, the attenuation provided by them is not represented in the noise contour map.

Exhibit C Existing Roadway Noise Level Contours (CNEL)



6.1.3 Rail Noise

Noise associated with the existing Union Pacific Railroad (UPRR) line that generally runs parallel to State Route 99 also contributes to noise in the Plan Area. The Union Pacific Railroad extends in a southeast/northwest direction ranging between 320 and 2,100 feet east of the project area. Based on count data available provided by the Federal Railroad Administration (FRA 2019), fourteen train trips per day (split evenly between daytime and nighttime hours) utilize the rail lines located east of the project area and State Route 99 and north of West Ashlan Avenue. There are existing residential land uses located within the project area as close as 380 feet to the rail lines north of West Ashlan Avenue and 380 feet from the rail lines south of West Ashlan Avenue. There is a rail yard east of State Route 99 that extends from approximately 450 feet north of Clinton Avenue to West Ashlan Avenue. Noise level contours associated with the UPRR are shown in Exhibit D.

6.1.4 Airport/Aircraft Noise

There are no airports located within the Plan Area, and the Plan Area is not located within any airport noise contours (City of Fresno 2014). The Plan Area is over 2 miles from any private or public airport. The Plan Area is, however, affected by fly-over noise associated with the Fresno Yosemite International Airport, the Fresno-Chandler Downtown Airport, and the Sierra Sky Park Airport. Commercial jet aircraft operations are limited to the Fresno Yosemite International Airport. The Air National Guard is also stationed there and operates military jets and other aircraft. Private and commercial operations with smaller aircraft use the Fresno Chandler Downtown Airport, while only small private aircraft use the Sierra Sky Park Airport.

6.1.4 Agricultural Noise

The project area is also exposed to agricultural noise, including field and crop maintenance, hauling, and crop dusting from small aircraft. The noise from these sources mostly occurs within the confines of the agricultural fields and is seasonal. A characteristic of agricultural noise is short periods of noisy activities separated by long periods of little or no noise-producing activities. The FAA regulates noise associated with aircraft once they leave the ground. FAA regulations require that all aircraft maintain a height of at least 500 feet above ground or objects on the ground, like a house. A crop duster can go below this height only to operate to apply chemicals and for no other reason.

6.2 Noise Measurement Results

Four (4) long-term 24-hour noise measurements and twelve (12) short-term 10-minute noise measurements were conducted throughout the Plan Area on June 3, 2019, to document the existing noise environment. Four (4) additional short-term 15-minute noise measurements were taken on December 4, 2023. Noise measurement locations are shown in Exhibit E.

6.2.1 Short-Term Noise Measurements

Measured noise levels within the Plan Area ranged between 54.4 and 74.8 dBA Leq. Vehicle noise associated with surface streets, State Route 99, and the existing rail line were the primary sources of ambient noise. Secondary noise sources included typical residential activities and landscaping

equipment. Noise measurement results are presented in Table 11. Field notes and meter output are provided in Appendix B.

Table 11: Short-Term Noise Measurement Summary

Noise Measurement Location	Approximate Address	Date	Time	A-Weighted Sound Level (dBA)						
				Leq	Lmax	Lmin	L2	L8	L25	L50
1	Herndon Avenue & N Parkway Drive	06/03/19	9:28 AM	67.6	78.3	54.5	74.7	71.3	68.0	65.6
2	N Bryan Avenue & W Shaw Avenue	06/03/19	9:48 AM	69.5	84.1	40.9	78.3	75.8	69.4	60.4
3	N Polk Avenue and W Gettysburg Avenue	06/03/19	10:15 AM	61.5	82.5	41.3	68.1	62.2	58.8	54.2
4	N Bryan Avenue & W Ashlan Avenue	06/03/19	10:32 AM	54.4	69.5	37.8	63.1	58.4	53.7	50.0
5	N Polk Avenue & W Ashlan Avenue	06/03/19	12:13 PM	64.6	86.5	45.4	71.6	67.7	64.3	60.8
6	N. Dakota Avenue & W. Brawley Avenue	06/03/19	2:19 PM	74.8	99.8	50.2	79.2	72.6	67.5	64.3
7	N Grantland Avenue & W Shields Avenue	06/03/19	12:38 PM	72.8	93.4	37.5	81.4	74.7	65.0	56.2
8	N Polk Avenue & W Shields Avenue	06/03/19	12:54 PM	66.1	86.3	51.5	75.5	70.1	62.6	58.9
9	N Blythe Avenue & W Shields Avenue	06/03/19	1:09 PM	64.4	79.9	48.1	73.5	68.9	63.4	59.5
10	N Bryan Avenue & W Clinton Avenue	06/03/19	1:26 PM	59.6	79.5	31.9	70.4	61.6	52.7	43.8
11	N Cornelia Avenue & W Clinton Avenue	06/03/19	1:42 PM	65.8	85.0	44.7	73.4	68.7	64.7	60.4
12	N Marks Avenue & W Clinton Avenue	06/03/19	2:00 PM	68.8	85.2	55.2	75.9	72.7	69.6	65.6
13	N. Veterans Boulevard & W Barstow Avenue	12/04/23	1:26 PM	62.0	77.6	44.2	70.2	65.4	61.3	57.2
14	N Hayes Avenue & W Gettysburg Avenue	12/04/23	2:09 PM	64.0	78.3	42.3	73.8	68.5	62.4	57.8
15	W Ashlan Avenue & N Blythe Avenue	12/04/23	3:16 PM	63.1	81.0	50.3	70.0	65.8	62.2	59.2
16	N Polk Avenue & W Dayton Avenue	12/04/23	2:34 PM	66.8	78.8	42.7	76.4	71.4	66.9	60.2
Notes: dBA = A-weighted decibels Leq = equivalent noise level Lmax = maximum noise level Lmin = minimum noise level Ln = noise level exceeded n percent of the measurement period										

6.2.2 Long-Term Noise Measurements

Four (4) long-term noise measurements (24 consecutive hours) were taken in order to document the Community Noise Equivalent Level (CNEL) at different locations throughout the Plan Area. As shown in Table 12, the measured CNEL ranged between 60.5 and 70.2 dBA. The primary noise source was vehicle traffic. Table 12 also outlines the daytime (7AM to 7PM), evening (7PM to 10PM), and nighttime (10PM to 7AM) Leq levels at each location. These represent the average level over each time period (day/evening/night). Field notes and meter output are provided in Appendix B.

Table 12: Long-Term Noise Measurement Summary

Noise Measurement Location	Approximate Address	Date	Description	A-Weighted Sound Level (dBA)			
				Daytime Leq	Evening Leq	Nighttime Leq	CNEL
LT1	N Grantland Avenue & W Barstow Avenue	6/3/19 - 6/4/19	Vehicle traffic traveling on N Valentine Avenue and SR-99	58.8	56.1	52.7	60.7
LT2	N Valentine Avenue & W Shields Avenue	6/3/19-6/4/19	Vehicle traffic traveling on N Grantland Avenue and W Barstow Avenue	65.4	62.1	63.4	70.8
LT3	N Blythe Avenue & W Ashlan Avenue	6/4/19-6/5/19	Vehicle traffic traveling on N Blythe Avenue and W Ashlan Avenue	67.3	65.5	61.5	69.1
LT4	N Hayes Avenue & W Ashlan Avenue	6/3/19-6/4/19	Vehicle Noise traveling on N Hayes Avenue and W Ashlan Avenue	65.8	61.3	58.6	67.1
Notes: dBA = A-weighted decibels Leq = equivalent noise level Lmax = maximum noise level Lmin = minimum noise level Ln = noise level exceeded n percent of the measurement period							

Exhibit D Union Pacific Railroad Noise Level Contours (CNEL)

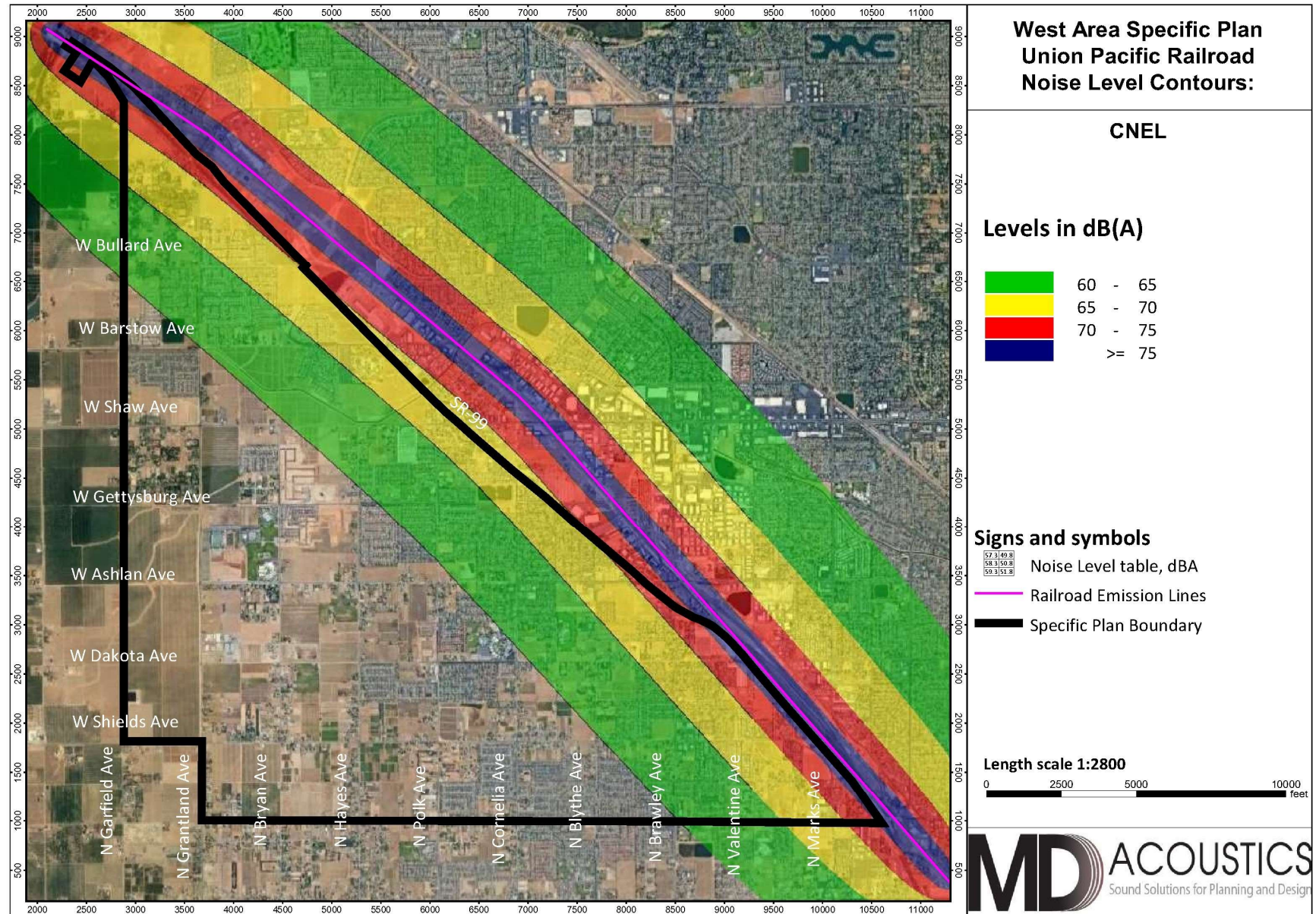
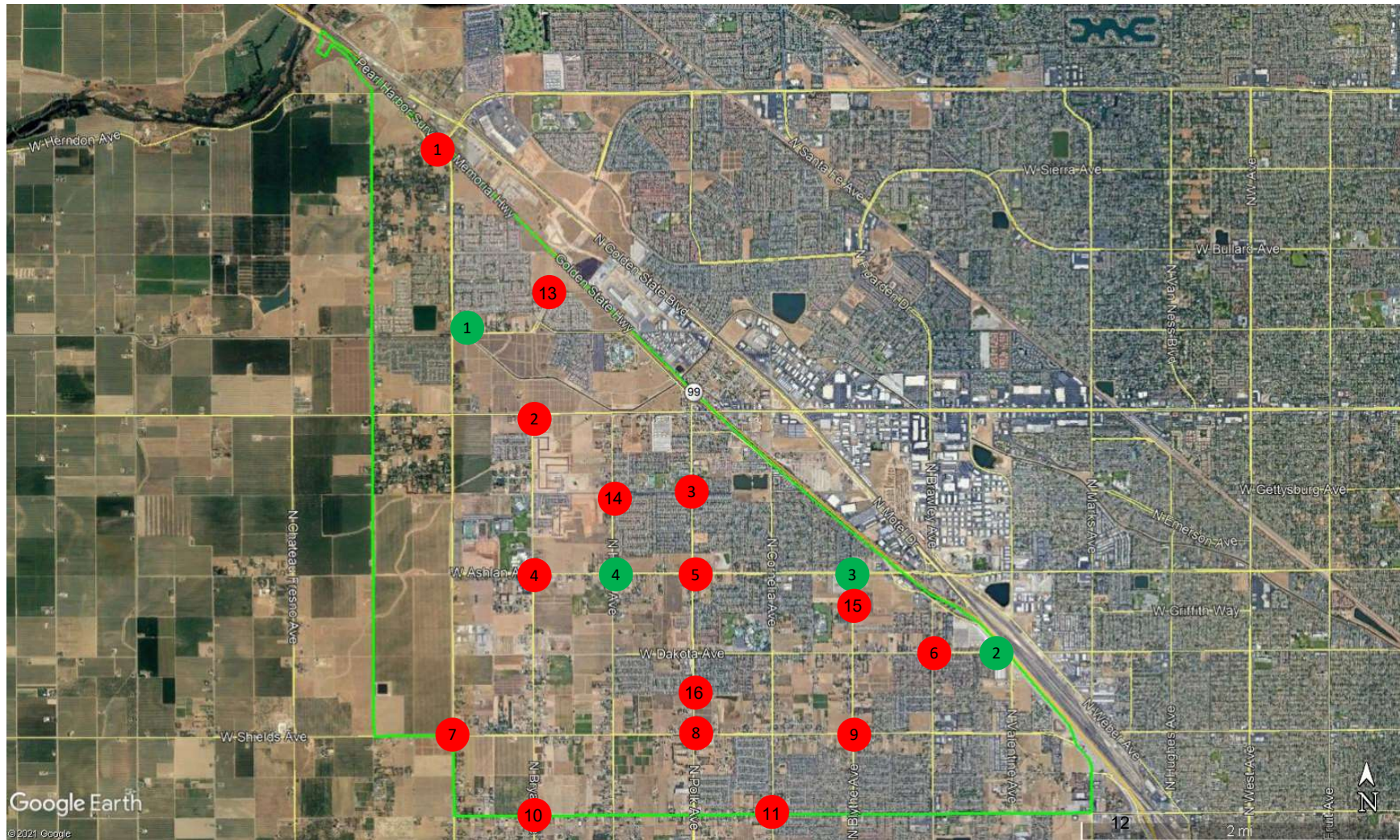


Exhibit E Noise Measurement Location Map

- = West Area Specific Plan Boundary
- 1 = Long Term measurement (24-Hour)
- 1 = Short Term measurement (10-Minute)



6.3 Vibration Sources in the Plan Area

The main sources of vibration in the project area are related to vehicles, rail, and construction. Typical roadway traffic, including heavy trucks, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage. However, there have been cases in which heavy trucks traveling over potholes or other discontinuities in the pavement have caused vibration high enough to result in complaints from nearby residents. These types of issues typically can be resolved by smoothing the roadway surface (Caltrans 2013b).

Construction activities that produce vibration that can be felt by adjacent land uses include vibratory equipment, large bulldozers, and pile drivers. The primary source of vibration during construction is usually a bulldozer. A large bulldozer has a peak particle velocity of 0.089 inches per second at 25 feet.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts to and from the project and compares the results to the City’s Noise Standards. The analysis details the estimated exterior noise levels associated with traffic from adjacent roadways and from on-site stationary noise sources.

7.1 Future Exterior Noise

Each future noise source related to the project was evaluated in light of applicable City of Fresno and West Area Specific Plan policies and ordinances, and programmatic mitigation measures and conditions of approval are provided as applicable.

7.1.1 Stationary General Land Use Noise

The West Area Plan proposes the relocation of higher-density land uses away from the most western and southwestern portions of the Plan Area, where they are distant from public transit and community amenities, and transfers those higher-density land use designations to major corridors. The Specific Plan would result in an increase in land designated for employment, mixed-use, open space, and public facilities uses and a decrease in land designated for residential and commercial uses. Typical stationary noise sources and associated noise levels as measured ten feet from the source are presented below¹.

- Parking lot noise 50-75 dBA
- HVAC 55-100 dBA
- Property maintenance 75-95 dBA
- Trash truck 85-90 dBA
- Loading/unloading 65-82 dBA
- Recreational noise 50-90 dBA
- Amplified music 80-105 dBA
- Car wash 85-100 dBA
- Event venue 65-75 dBA
- Idling heavy truck 72 dBA

Due to the suburban/rural nature of the Plan Area, the development of the West Area Specific Plan will result in a substantial increase in existing ambient noise conditions. Enforcement of Sections 10-105 through 10-109 of the City’s Noise Ordinance and analysis of noise-producing projects, along with any needed mitigation measures, will reduce noise impacts associated with future development. Increases in ambient noise levels associated with existing and future stationary noise impacts may result in

¹ The noise ranges presented are intended to give a general idea of typical urban/suburban stationary noise sources. Depending on the number of patrons and the specific activity, i.e. outdoor winery concert vs. a rock band, noise levels will vary.

significant impacts. The following mitigation measures and conditions of approval should be implemented to reduce impacts associated with stationary noise sources in the Plan Area.

Mitigation Measures for Stationary Noise

MM-1. Avoid the placement of new noise-producing uses in proximity to noise-sensitive land uses.

MM-2. Apply noise level performance standards provided in Table 7 to proposed new noise-producing uses.

Conditions of Approval for Exterior Noise

COP-1. Require new noise-sensitive uses in near proximity to noise-producing facilities to include conditions of approval that would ensure compliance with noise performance standards presented in Table 7.

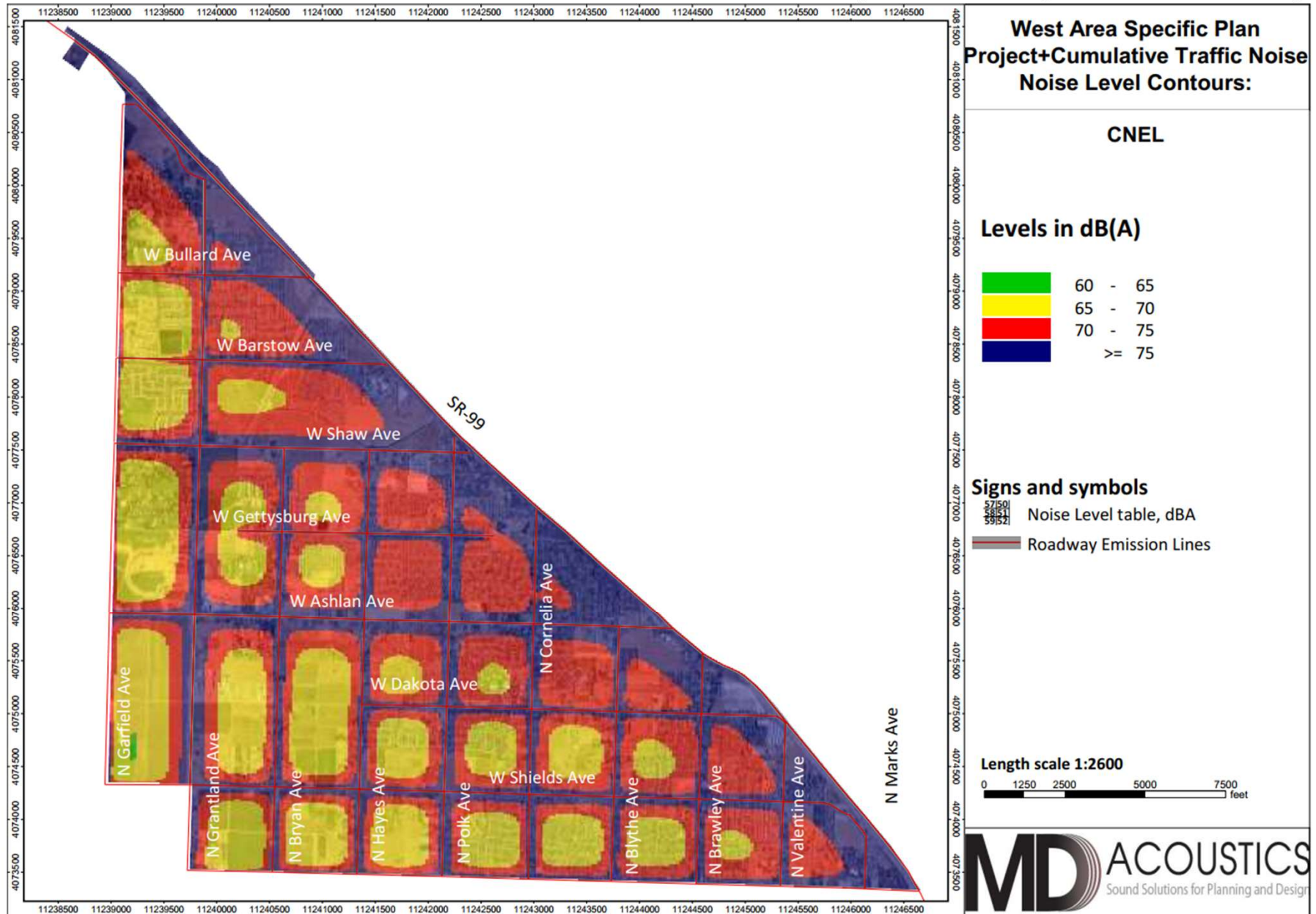
7.1.2 Roadway Noise

The primary noise source in the community will continue to be vehicle traffic traveling on surface streets and on State Route 99. Future noise levels associated with acoustically significant roadways within the Plan Area are shown on Exhibit F. Vehicle traffic-generated noise associated with State Route 99 will continue to be the dominant noise source in the eastern portion of the Plan Area, with ADTs ranging between 77,000 and 107,000 adjacent to the Plan Area.

Although most noise-sensitive land uses adjacent to State Route 99 are shielded by existing sound walls, topography, or buildings, there are still some noise-sensitive land uses where cumulative plus project noise levels will exceed the City's 65 dBA Ldn/CNEL noise standard. Noise levels in the Plan Area are expected to exceed 65 dBA CNEL in most areas where shielding from traffic noise is not provided. This is a significant impact and will require mitigation. Mitigation measures and conditions of approval are provided at the end of this impact discussion.

Exhibit F

Cumulative Plus Project Roadway Noise Contours (CNEL)



Buildout of the Plan Area will also result in substantial increases in ambient noise levels. Existing exterior noise levels along Plan Area roadways are presented in Table 13, cumulative plus project traffic noise levels are presented in Table 14, and a comparison of the two conditions is presented in Table 15.

Table 13: Existing Exterior Noise Levels Along Roadways (dBA, CNEL)

Roadway	Segment Limits	dBA CNEL @50 ft	Distances to Contour (ft):			
			70	65	60	55
W Herndon Ave	N. Garfield Ave to N Parkway Drive	No Data	No Data	No Data	No Data	No Data
W Bullard Ave	N Garfield Ave to N Grantland Ave	54	1	4	12	36
W Bullard Ave	N Grantland Ave to N Bryan Ave	61	6	18	56	176
W Barstow Ave	N Garfield to N Grantland Ave	59	4	13	42	134
W Barstow Ave	N Grantland Ave to N Bryan Ave	55	2	5	15	49
W Barstow Ave	N Bryan Ave to N Contessa Ave	No Data	No Data	No Data	No Data	No Data
W Shaw Ave	N Garfield Ave to N Grantland Ave	65	16	50	159	504
W Shaw Ave	N Grantland Ave to N Bryan Ave	66	19	59	186	588
W Shaw Ave	N Bryan Ave to N Hayes Ave	66	22	69	219	693
W Shaw Ave	N Hayes Ave to N Polk Ave	69	41	129	409	1294
W Shaw Ave	N Polk Ave to State Route 99	72	88	277	875	2767
W Gettysburg Ave	N Bryan Ave to N Hayes Ave	58	3	10	33	103
W Gettysburg Ave	N Hayes Ave to N Polk Ave	59	4	12	37	119
W Gettysburg Ave	N Polk Ave to N Barcus	60	5	14	46	145
W Ashlan Ave	N. Garfield to N Grantland	No Data	No Data	No Data	No Data	No Data
W Ashlan Ave	N Grantland Ave to N Bryan Ave	65	14	45	142	450
W Ashlan Ave	N Bryan Ave to N Hayes Ave	62	8	26	82	260
W Ashlan Ave	N Hayes Ave to N Polk Ave	60	5	17	54	172
W Ashlan Ave	N Polk Ave to N Cornelia Ave	65	17	55	173	546
W Ashlan Ave	N Cornelia Ave to N Blythe Ave	69	43	137	434	1373
W Ashlan Ave	N Blythe Ave to State Route 99	71	63	198	626	1981
W Dakota Ave	N Bryan Ave to N Hayes Ave	No Data	No Data	No Data	No Data	No Data
W Dakota Ave	N Hayes Ave to N Polk Ave	59	4	12	37	119
W Dakota Ave	N Polk Ave to N Cornelia Ave	63	10	31	98	310
W Dakota Ave	N Cornelia Ave to N Blythe Ave	62	8	26	82	258
W Dakota Ave	N Blythe Ave to N Brawley Ave	61	6	19	61	191
W Dakota Ave	N Brawley Ave to N Valentine Ave	60	5	15	46	146
W Shields Ave	N. Garfield Ave to Grantland Ave	60	5	16	52	164
W Shields Ave	N Grantland Ave to N Bryan Ave	60	5	17	53	167
W Shields Ave	N Bryan Ave to N Hayes Ave	61	7	22	68	216
W Shields Ave	N Hayes Ave to N Polk Ave	61	6	20	62	198
W Shields Ave	N Polk Ave to N Cornelia Ave	64	13	42	133	419
W Shields Ave	N Cornelia Ave to N Blythe Ave	63	9	28	88	280

Table 13: Existing Exterior Noise Levels Along Roadways (dBA, CNEL)

Roadway	Segment Limits	dBA CNEL @50 ft	Distances to Contour (ft):			
			70	65	60	55
W Shields Ave	N Blythe Ave to N Brawley Ave	62	8	27	85	267
W Shields Ave	N Brawley Ave to N Valentine Ave	64	11	35	111	353
W Shields Ave	N Valentine Ave to N Marks Ave	64	13	42	133	419
W Clinton Ave	N Grantland Ave to N Bryan Ave	53	1	3	11	34
W Clinton Ave	N Bryan Ave to N Hayes Ave	56	2	6	19	59
W Clinton Ave	N Hayes Ave to N Polk Ave	58	3	9	28	88
W Clinton Ave	N Polk Ave to N Cornelia Ave	65	15	48	151	478
W Clinton Ave	N Cornelia Ave to N Blythe Ave	70	46	145	459	1452
W Clinton Ave	N Blythe Ave to N Brawley Ave	71	67	211	667	2110
W Clinton Ave	N Brawley Ave to N Valentine Ave	70	47	150	474	1498
W Clinton Ave	N Valentine Ave to N Marks Ave	70	50	159	503	1590
W Clinton Ave	N Marks Ave to W Vassar Ave	75	144	454	1435	4538
N Garfield Ave	W Herndon Ave to W Bullard Ave	No Data	No Data	No Data	No Data	No Data
N Garfield Ave	W Bullard Ave to W Barstow Ave	No Data	No Data	No Data	No Data	No Data
N Garfield Ave	W Barstow Ave to W Shaw Ave	No Data	No Data	No Data	No Data	No Data
N Garfield Ave	W Shaw Ave to W Gettysburg Ave	No Data	No Data	No Data	No Data	No Data
N Garfield Ave	W Gettysburg Ave to W Ashlan Ave	No Data	No Data	No Data	No Data	No Data
N Garfield Ave	W Dakota Ave to W Shields Ave	No Data	No Data	No Data	No Data	No Data
N Parkway Drive	N Herndon Ave to W Herndon Ave	No Data	No Data	No Data	No Data	No Data
N Grantland Ave	N Parkway Drive to W Bullard Ave	65	23	49	105	226
N Grantland Ave	W Bullard Ave to W Barstow Ave	67	32	69	149	322
N Grantland Ave	W Barstow Ave to W Shaw Ave	68	30	96	303	957
N Grantland Ave	W Shaw Ave to W Gettysburg Ave	63	10	33	104	327
N Grantland Ave	W Gettysburg Ave to W Ashlan Ave	66	18	56	178	563
N Grantland Ave	W Ashlan Ave to W Dakota Ave	64	14	43	136	429
N Grantland Ave	W Dakota Ave to W Shields Ave	No Data	No Data	No Data	No Data	No Data
N Grantland Ave	W Shields Ave to W Clinton Ave	63	10	32	102	324
N Bryan Ave	W Shaw Ave to W Gettysburg Ave	60	5	15	46	146
N Bryan Ave	W Gettysburg Ave to W Ashlan Ave	63	11	35	110	347
N Bryan Ave	W Ashlan Ave to W Dakota Ave	61	6	20	62	196
N Bryan Ave	W Dakota Ave to W Shields Ave	58	3	11	34	106
N Bryan Ave	W Shields Ave to W Clinton Ave	54	1	4	12	40
N Hayes Ave	W Santa Ana Ave to W Gettysburg Ave	63	10	30	95	302
N Hayes Ave	W Gettysburg Ave to W Ashlan Ave	61	6	19	60	190
N Hayes Ave	W Ashland Ave to W Dakota Ave	60	5	15	46	146
N Hayes Ave	W Dakota Ave to W Shields Ave	59	4	13	41	131
N Hayes Ave	W Shields Ave to W Clinton Ave	58	3	10	32	100

Table 13: Existing Exterior Noise Levels Along Roadways (dBA, CNEL)

Roadway	Segment Limits	dBA CNEL @50 ft	Distances to Contour (ft):			
			70	65	60	55
N Polk Ave	W Shaw Ave to W Gettysburg Ave	68	32	103	325	1027
N Polk Ave	W Gettysburg Ave to W Ashlan Ave	64	13	41	129	407
N Polk Ave	W Ashland Ave to W Dakota Ave	65	15	47	149	470
N Polk Ave	W Dakota Ave to W Shields Ave	64	13	41	130	411
N Polk Ave	W Shields Ave to W Clinton Ave	63	10	31	100	315
N Cornelia Ave	N Parkway Drive to W Gettysburg Ave	66	20	64	202	637
N Cornelia Ave	W Gettysburg to W Ashlan Ave	66	20	64	202	637
N Cornelia Ave	W Ashland Ave to W Dakota Ave	67	28	87	276	872
N Cornelia Ave	W Dakota Ave to W Shields Ave	64	11	35	111	353
N Cornelia Ave	W Shields Ave to W Clinton Ave	66	20	63	198	626
N Blythe Ave	W Ashlan Ave to W Dakota Ave	66	18	56	178	562
N Blythe Ave	W Dakota Ave to W Shields Ave	63	9	29	91	289
N Blythe Ave	W Shields Ave to W Clinton Ave	63	9	30	94	298
N Brawley Ave	N Parkway Drive to W Dakota Ave	64	13	40	127	401
N Brawley Ave	W Dakota Ave to W Shields Ave	64	12	39	122	386
N Brawley Ave	W Shields Ave to W Clinton Ave	64	12	36	115	365
N Valentine Ave	N Parkway Drive to W Shields Ave	60	5	16	50	158
N Valentine Ave	W Shields Ave to W Clinton Ave	59	4	13	40	128
Notes: 1. Exterior noise levels calculated at 5-feet above ground. 2. Noise levels calculated from centerline of subject roadway. 3. Refer to Appendix C for projected noise level calculations. 4. The projected noise levels at 50 ft are theoretical and do not take into consideration the effect of topography, noise barriers, structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5-10 dBA from what is shown in the table. Therefore, the levels that are shown are for comparative purposes only to show the difference in projected noise levels without and with the project.						

Table 14: Cumulative Plus Project Exterior Noise Levels Along Roadways (dBA , CNEL)

Roadway	Segment Limits	dBA CNEL @ 50ft	Distance to Noise Contour (ft):			
			70	65	60	55
W Herndon Ave	N. Garfield Ave to N Parkway Drive	62	7	23	71	226
W Bullard Ave	N Garfield Ave to N Grantland Ave	54	1	4	11	36
W Bullard Ave	N Grantland Ave to N Bryan Ave	65	14	45	141	447
W Barstow Ave	N Garfield to N Grantland Ave	50	0	2	5	16
W Barstow Ave	N Grantland Ave to N Bryan Ave	68	29	91	289	912
W Barstow Ave	N Bryan Ave to N Contessa Ave	72	78	248	783	2476
W Shaw Ave	N Garfield Ave to N Grantland Ave	69	37	118	373	1181

Table 14: Cumulative Plus Project Exterior Noise Levels Along Roadways (dBA , CNEL)

Roadway	Segment Limits	dBA CNEL @ 50ft	Distance to Noise Contour (ft):			
			70	65	60	55
W Shaw Ave	N Grantland Ave to N Bryan Ave	72	83	263	832	2632
W Shaw Ave	N Bryan Ave to N Hayes Ave	76	210	663	2098	6633
W Shaw Ave	N Hayes Ave to N Polk Ave	79	434	1373	4343	13734
W Shaw Ave	N Polk Ave to State Route 99	82	850	2688	8499	26875
W Gettysburg Ave	N Bryan Ave to N Hayes Ave	67	25	79	248	785
W Gettysburg Ave	N Hayes Ave to N Polk Ave	68	31	99	313	991
W Gettysburg Ave	N Polk Ave to N Barcus	69	36	115	363	1148
W Ashlan Ave	N. Garfield to N Grantland	63	11	34	106	335
W Ashlan Ave	N Grantland Ave to N Bryan Ave	73	94	297	938	2966
W Ashlan Ave	N Bryan Ave to N Hayes Ave	73	106	335	1061	3354
W Ashlan Ave	N Hayes Ave to N Polk Ave	73	109	345	1090	3447
W Ashlan Ave	N Polk Ave to N Cornelia Ave	74	134	425	1343	4247
W Ashlan Ave	N Cornelia Ave to N Blythe Ave	74	120	379	1199	3790
W Ashlan Ave	N Blythe Ave to State Route 99	74	134	425	1343	4247
W Dakota Ave	N Bryan Ave to N Hayes Ave	65	15	49	154	486
W Dakota Ave	N Hayes Ave to N Polk Ave	69	37	118	373	1178
W Dakota Ave	N Polk Ave to N Cornelia Ave	67	28	87	276	872
W Dakota Ave	N Cornelia Ave to N Blythe Ave	67	23	73	231	730
W Dakota Ave	N Blythe Ave to N Brawley Ave	65	16	51	163	515
W Dakota Ave	N Brawley Ave to N Valentine Ave	63	10	33	104	328
W Shields Ave	N. Garfield Ave to Grantland Ave	65	16	50	159	503
W Shields Ave	N Grantland Ave to N Bryan Ave	67	25	78	248	784
W Shields Ave	N Bryan Ave to N Hayes Ave	68	29	92	291	921
W Shields Ave	N Hayes Ave to N Polk Ave	66	21	66	210	664
W Shields Ave	N Polk Ave to N Cornelia Ave	71	59	186	588	1859
W Shields Ave	N Cornelia Ave to N Blythe Ave	68	32	102	322	1017
W Shields Ave	N Blythe Ave to N Brawley Ave	68	32	100	316	1001
W Shields Ave	N Brawley Ave to N Valentine Ave	69	37	117	369	1167
W Shields Ave	N Valentine Ave to N Marks Ave	67	26	82	260	822
W Clinton Ave	N Grantland Ave to N Bryan Ave	61	6	18	56	178
W Clinton Ave	N Bryan Ave to N Hayes Ave	64	14	43	137	432
W Clinton Ave	N Hayes Ave to N Polk Ave	68	31	99	313	990
W Clinton Ave	N Polk Ave to N Cornelia Ave	68	32	101	318	1006
W Clinton Ave	N Cornelia Ave to N Blythe Ave	73	104	328	1037	3280
W Clinton Ave	N Blythe Ave to N Brawley Ave	74	135	426	1347	4258
W Clinton Ave	N Brawley Ave to N Valentine Ave	74	125	396	1253	3962

Table 14: Cumulative Plus Project Exterior Noise Levels Along Roadways (dBA , CNEL)

Roadway	Segment Limits	dBA CNEL @ 50ft	Distance to Noise Contour (ft):			
			70	65	60	55
W Clinton Ave	N Valentine Ave to N Marks Ave	75	162	511	1617	5114
W Clinton Ave	N Marks Ave to W Vassar Ave	79	433	1370	4331	13696
N Garfield Ave	W Herndon Ave to W Bullard Ave	63	9	30	94	296
N Garfield Ave	W Bullard Ave to W Barstow Ave	63	11	34	108	343
N Garfield Ave	W Barstow Ave to W Shaw Ave	66	18	56	176	556
N Garfield Ave	W Shaw Ave to W Gettysburg Ave	64	12	39	124	391
N Garfield Ave	W Gettysburg Ave to W Ashlan Ave	64	11	35	112	353
N Garfield Ave	W Dakota Ave to W Shields Ave	63	10	32	100	318
N Parkway Drive	N Herndon Ave to W Herndon Ave	63	10	31	99	312
N Grantland Ave	N Parkway Drive to W Bullard Ave	67	24	77	244	770
N Grantland Ave	W Bullard Ave to W Barstow Ave	71	60	190	602	1904
N Grantland Ave	W Barstow Ave to W Shaw Ave	71	57	181	572	1808
N Grantland Ave	W Shaw Ave to W Gettysburg Ave	72	71	226	715	2261
N Grantland Ave	W Gettysburg Ave to W Ashlan Ave	76	206	651	2060	6515
N Grantland Ave	W Ashlan Ave to W Dakota Ave	75	148	468	1480	4680
N Grantland Ave	W Dakota Ave to W Shields Ave	76	189	599	1894	5989
N Grantland Ave	W Shields Ave to W Clinton Ave	74	137	433	1369	4329
N Bryan Ave	W Bullard Ave to W Barstow Ave	70	47	148	469	1483
N Bryan Ave	W Barstow Ave to W Shaw Ave	70	44	138	436	1380
N Bryan Ave	W Shaw Ave to W Gettysburg Ave	70	48	151	477	1508
N Bryan Ave	W Gettysburg Ave to W Ashlan Ave	72	80	251	795	2515
N Bryan Ave	W Ashlan Ave to W Dakota Ave	71	65	206	651	2059
N Bryan Ave	W Dakota Ave to W Shields Ave	66	20	63	198	626
N Bryan Ave	W Shields Ave to W Clinton Ave	64	14	43	136	430
N Hayes Ave	W. Santa Ana Ave to W Gettysburg Ave	72	84	265	838	2649
N Hayes Ave	W Gettysburg Ave to W Ashlan Ave	73	95	300	950	3003
N Hayes Ave	W Ashland Ave to W Dakota Ave	69	40	125	396	1253
N Hayes Ave	W Dakota Ave to W Shields Ave	69	38	121	381	1206
N Hayes Ave	W Shields Ave to W Clinton Ave	68	34	108	342	1081
N Polk Ave	W Shaw Ave to W Gettysburg Ave	75	153	484	1530	4839
N Polk Ave	W Gettysburg Ave to W Ashlan Ave	73	96	305	963	3046
N Polk Ave	W Ashland Ave to W Dakota Ave	72	75	236	745	2357
N Polk Ave	W Dakota Ave to W Shields Ave	71	56	178	564	1782
N Polk Ave	W Shields Ave to W Clinton Ave	70	52	164	518	1638
N Cornelia Ave	N Parkway Drive to W Gettysburg Ave	69	36	113	357	1130
N Cornelia Ave	W Gettysburg to W Ashlan Ave	71	67	211	667	2110

Table 14: Cumulative Plus Project Exterior Noise Levels Along Roadways (dBA , CNEL)

Roadway	Segment Limits	dBA CNEL @ 50ft	Distance to Noise Contour (ft):			
			70	65	60	55
N Cornelia Ave	W Ashland Ave to W Dakota Ave	70	47	149	472	1492
N Cornelia Ave	W Dakota Ave to W Shields Ave	66	21	65	206	650
N Cornelia Ave	W Shields Ave to W Clinton Ave	69	42	134	423	1337
N Blythe Ave	W Ashlan Ave to W Dakota Ave	69	36	112	356	1125
N Blythe Ave	W Dakota Ave to W Shields Ave	65	16	50	158	500
N Blythe Ave	W Shields Ave to W Clinton Ave	64	12	36	115	365
N Brawley Ave	N Parkway Drive to W Dakota Ave	70	51	162	513	1624
N Brawley Ave	W Dakota Ave to W Shields Ave	69	43	135	428	1352
N Brawley Ave	W Shields Ave to W Clinton Ave	71	63	198	625	1978
N Valentine Ave	N Parkway Drive to W Shields Ave	66	21	66	210	663
N Valentine Ave	W Shields Ave to W Clinton Ave	66	19	59	186	588
Notes: 1. Exterior noise levels calculated at 5-feet above ground. 2. Noise levels calculated from centerline of subject roadway. 3. Refer to Appendix C for projected noise level calculations. 4. The projected noise levels at 50 ft are theoretical and do not take into consideration the effect of topography, noise barriers, structures or other factors which will reduce the actual noise level in the outdoor living areas. These factors can reduce the actual noise levels by 5-10 dBA from what is shown in the table. Therefore, the levels that are shown are for comparative purposes only to show the difference in existing and cumulative plus project projected noise levels						

Table 15: Change in Noise Along Roadways Due to West Area Specific Plan (dBA, CNEL)

Roadway ¹	Segment	CNEL at 50 Feet dBA ²				
		Existing Without Project	Cumulative Plus Project	Change in Noise Level	Exceeds Compatibility Criteria ³	Potential Significant Impact ⁴
W Herndon Ave	N Garfield Ave to N Parkway Drive	No Data	61.5	N/A	No	No
W Bullard Ave	N Garfield Ave to N Grantland Ave	53.6	53.6	0.0	No	No
W Bullard Ave	N Grantland Ave to N Bryan Ave	60.5	64.5	4.0	No	No
W Barstow Ave	N Garfield to N Grantland Ave	59.3	50.0	-9.3	No	No
W Barstow Ave	N Grantland Ave to N Bryan Ave	54.9	67.6	12.7	Yes	Yes
W Barstow Ave	N Bryan Ave to N Contessa Ave	No Data	71.9	N/A	No ⁵	No
W Shaw Ave	N Garfield Ave to N Grantland Ave	65.0	68.7	3.7	Yes	Yes
W Shaw Ave	N Grantland Ave to N Bryan Ave	65.7	72.2	6.5	Yes	Yes
W Shaw Ave	N Bryan Ave to N Hayes Ave	66.4	76.2	9.8	Yes	Yes
W Shaw Ave	N Hayes Ave to N Polk Ave	69.1	79.4	10.3	Yes	Yes

Table 15: Change in Noise Along Roadways Due to West Area Specific Plan (dBA, CNEL)

Roadway ¹	Segment	CNEL at 50 Feet dBA ²				
		Existing Without Project	Cumulative Plus Project	Change in Noise Level	Exceeds Compatibility Criteria ³	Potential Significant Impact ⁴
W Shaw Ave	N Polk Ave to State Route 99	72.4	82.3	9.9	Yes	Yes
W Gettysburg Ave	N Bryan Ave to N Hayes Ave	58.2	67.0	8.8	No ⁵	No
W Gettysburg Ave	N Hayes Ave to N Polk Ave	58.7	68.0	9.3	Yes	Yes
W Gettysburg Ave	N Polk Ave to N Barcus	59.6	68.6	9.0	Yes	Yes
W Ashlan Ave	N Garfield to N Grantland	No Data	63.3	N/A	No	No
W Ashlan Ave	N Grantland Ave to N Bryan Ave	64.5	72.7	8.2	Yes	Yes
W Ashlan Ave	N Bryan Ave to N Hayes Ave	62.2	73.3	11.1	Yes	Yes
W Ashlan Ave	N Hayes Ave to N Polk Ave	60.4	73.4	13.0	Yes	Yes
W Ashlan Ave	N Polk Ave to N Cornelia Ave	65.4	74.3	8.9	Yes	Yes
W Ashlan Ave	N Cornelia Ave to N Blythe Ave	69.4	73.8	4.4	Yes	Yes
W Ashlan Ave	N Blythe Ave to State Route 99	71.0	74.3	3.3	n/a	No
W Dakota Ave	N Bryan Ave to N Hayes Ave	No Data	64.9	N/A	No	No
W Dakota Ave	N Hayes Ave to N Polk Ave	58.7	68.7	10.0	Yes	Yes
W Dakota Ave	N Polk Ave to N Cornelia Ave	62.9	67.4	4.5	Yes	Yes
W Dakota Ave	N Cornelia Ave to N Blythe Ave	62.1	66.6	4.5	Yes	Yes
W Dakota Ave	N Blythe Ave to N Brawley Ave	60.8	65.1	4.3	No	No
W Dakota Ave	N Brawley Ave to N Valentine Ave	59.7	63.2	6.5	No	No
W Shields Ave	N Garfield Ave to Grantland Ave	60.2	65.0	4.8	No	No
W Shields Ave	N Grantland Ave to N Bryan Ave	60.2	67.0	6.8	Yes	Yes
W Shields Ave	N Bryan Ave to N Hayes Ave	61.4	67.7	6.3	Yes	Yes
W Shields Ave	N Hayes Ave to N Polk Ave	61.0	66.2	5.2	Yes	Yes
W Shields Ave	N Polk Ave to N Cornelia Ave	64.2	70.7	6.5	Yes	Yes
W Shields Ave	N Cornelia Ave to N Blythe Ave	62.5	68.1	5.6	Yes	Yes
W Shields Ave	N Blythe Ave to N Brawley Ave	62.3	68.0	5.7	Yes	Yes
W Shields Ave	N Brawley Ave to N Valentine Ave	63.5	68.7	5.2	Yes	Yes
W Shields Ave	N Valentine Ave to N Marks Ave	64.2	67.2	3.0	Yes	Yes
W Clinton Ave	N Grantland Ave to N Bryan Ave	53.3	60.5	7.2	No	No
W Clinton Ave	N Bryan Ave to N Hayes Ave	55.7	64.4	8.7	No	No
W Clinton Ave	N Hayes Ave to N Polk Ave	57.5	68.0	10.5	Yes	Yes
W Clinton Ave	N Polk Ave to N Cornelia Ave	64.8	68.0	3.2	Yes	Yes
W Clinton Ave	N Cornelia Ave to N Blythe Ave	69.6	73.2	3.6	Yes	Yes
W Clinton Ave	N Blythe Ave to N Brawley Ave	71.3	74.3	3.0	Yes	Yes
W Clinton Ave	N Brawley Ave to N Valentine Ave	69.8	74.0	4.2	Yes	Yes

Table 15: Change in Noise Along Roadways Due to West Area Specific Plan (dBA, CNEL)

Roadway ¹	Segment	CNEL at 50 Feet dBA ²				
		Existing Without Project	Cumulative Plus Project	Change in Noise Level	Exceeds Compatibility Criteria ³	Potential Significant Impact ⁴
W Clinton Ave	N Valentine Ave to N Marks Ave	70.0	75.1	5.1	Yes	Yes
W Clinton Ave	N Marks Ave to W Vassar Ave	74.6	79.4	5.0	No	No
N Garfield Ave	W Herndon Ave to W Bullard Ave	No Data	62.7	N/A	No	No
N Garfield Ave	W Bullard Ave to W Barstow Ave	No Data	63.4	N/A	No	No
N Garfield Ave	W Barstow Ave to W Shaw Ave	No Data	65.5	N/A	Yes	Yes
N Garfield Ave	W Shaw Ave to W Gettysburg Ave	No Data	63.9	N/A	No	No
N Garfield Ave	W Gettysburg Ave to W Ashlan Ave	No Data	63.5	N/A	No	No
N Garfield Ave	W Dakota Ave to W Shields Ave	No Data	63.0	N/A	No	No
N Parkway Drive	N Herndon Ave to W Herndon Ave	No Data	62.9	N/A	No	No
N Grantland Ave	N Parkway Drive to W Bullard Ave	64.8	66.9	2.1	Yes	No
N Grantland Ave	W Bullard Ave to W Barstow Ave	67.1	70.8	3.7	Yes	Yes
N Grantland Ave	W Barstow Ave to W Shaw Ave	67.8	70.6	2.8	Yes	No
N Grantland Ave	W Shaw Ave to W Gettysburg Ave	63.2	71.6	8.4	Yes	Yes
N Grantland Ave	W Gettysburg Ave to W Ashlan Ave	65.5	76.1	10.6	Yes	Yes
N Grantland Ave	W Ashlan Ave to W Dakota Ave	64.3	74.7	10.4	Yes	Yes
N Grantland Ave	W Dakota Ave to W Shields Ave	No Data	75.8	N/A	Yes	Yes
N Grantland Ave	W Shields Ave to W Clinton Ave	63.1	74.4	11.3	Yes	Yes
N Bryan Ave	W Bullard Ave to W Barstow Ave	No Data	69.8	N/A	No	No
N Bryan Ave	W Barstow Ave to W Shaw Ave	No Data	69.4	N/A	No	No
N Bryan Ave	W Shaw Ave to W Gettysburg Ave	59.7	69.8	11.1	Yes	Yes
N Bryan Ave	W Gettysburg Ave to W Ashlan Ave	63.4	72.0	8.6	Yes	Yes
N Bryan Ave	W Ashlan Ave to W Dakota Ave	60.9	71.1	10.2	Yes	Yes
N Bryan Ave	W Dakota Ave to W Shields Ave	58.3	66.0	7.7	Yes	Yes
N Bryan Ave	W Shields Ave to W Clinton Ave	54.0	64.3	10.3	No	No
N Hayes Ave	W Santa Ana Ave to W Gettysburg Ave	62.8	72.2	9.4	Yes	Yes
N Hayes Ave	W Gettysburg Ave to W Ashlan Ave	60.8	72.8	12.0	Yes	Yes
N Hayes Ave	W Ashlan Ave to W Dakota Ave	59.7	69.0	9.3	Yes	Yes
N Hayes Ave	W Dakota Ave to W Shields Ave	59.2	68.8	9.6	Yes	Yes
N Hayes Ave	W Shields Ave to W Clinton Ave	58.0	68.3	10.3	Yes	Yes
N Polk Ave	W Shaw Ave to W Gettysburg Ave	68.1	74.9	6.8	Yes	Yes
N Polk Ave	W Gettysburg Ave to W Ashlan Ave	64.1	72.8	8.7	Yes	Yes
N Polk Ave	W Ashland Ave to W Dakota Ave	64.7	71.7	7.0	Yes	Yes

Table 15: Change in Noise Along Roadways Due to West Area Specific Plan (dBA, CNEL)

Roadway ¹	Segment	CNEL at 50 Feet dBA ²				
		Existing Without Project	Cumulative Plus Project	Change in Noise Level	Exceeds Compatibility Criteria ³	Potential Significant Impact ⁴
N Polk Ave	W Dakota Ave to W Shields Ave	64.2	70.5	6.3	Yes	Yes
N Polk Ave	W Shields Ave to W Clinton Ave	63.0	70.2	7.2	Yes	Yes
N Cornelia Ave	N Parkway Drive to W Gettysburg Ave	66.1	68.5	2.4	Yes	No
N Cornelia Ave	W Gettysburg to W Ashlan Ave	66.1	71.3	5.2	Yes	Yes
N Cornelia Ave	W Ashland Ave to W Dakota Ave	67.4	69.7	2.3	Yes	No
N Cornelia Ave	W Dakota Ave to W Shields Ave	63.5	66.1	2.6	Yes	No
N Cornelia Ave	W Shields Ave to W Clinton Ave	66.0	69.3	3.3	Yes	Yes
N Blythe Ave	W Ashlan Ave to W Dakota Ave	65.5	68.5	3.0	Yes	Yes
N Blythe Ave	W Dakota Ave to W Shields Ave	62.6	65.0	2.4	No	No
N Blythe Ave	W Shields Ave to W Clinton Ave	62.7	63.6	0.9	No	No
N Brawley Ave	N Parkway Drive to W Dakota Ave	64.0	70.1	6.1	Yes	Yes
N Brawley Ave	W Dakota Ave to W Shields Ave	63.9	69.3	5.4	Yes	Yes
N Brawley Ave	W Shields Ave to W Clinton Ave	63.6	71.0	7.4	Yes	Yes
N Valentine Ave	N Parkway Drive to W Shields Ave	60.0	66.2	6.2	Yes	Yes
N Valentine Ave	W Shields Ave to W Clinton Ave	59.1	65.7	6.6	Yes	Yes

¹ Exterior noise levels calculated at 5 feet above ground level.
² Noise levels calculated from centerline of subject roadway.
³ See Table 6.
⁴ Significant if results in a 3 dB increase in ambient noise levels and exceeds standard in Table 6 (65 CNEL).
⁵ Property line walls bring cumulative plus project level below 65 dBA CNEL.

As shown in Table 15 cumulative plus project traffic conditions will result in significant increases in ambient noise levels along the following road segments. This impact is significant, and mitigation is required.

- Traffic noise levels along W Shaw Avenue are expected to range between 69 to 82 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in increases ranging between 4 to 10 dBA CNEL.
- Traffic noise levels along W Ashlan Avenue are expected to range between 63 and 74 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in increases ranging between 3 and 13 dBA CNEL.

- Traffic noise levels along W Shields Avenue are expected to range between 65 to 71 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in an increase in ambient noise level of 3 to 7 dBA CNEL.
- Traffic noise levels along W Clinton Avenue are expected to range between 61 and 79 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in an increase in ambient noise level of 3 to 11 dBA CNEL.
- Traffic noise levels along N Grantland Avenue are expected to range between 67 and 76 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in increases in ambient noise levels between 2 to 11 dBA CNEL.
- Traffic noise levels along N Bryan Avenue are expected to range between 64 to 72 dBA CNEL, resulting in an increase of 8 to 11 dBA CNEL in ambient noise levels.
- Traffic noise levels along N Hayes Avenue are expected to range between 65.9 and 66.8 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in an increase in ambient noise levels ranging between 9 to 12 dBA CNEL.
- Traffic noise levels along N Polk Avenue are expected to range between 71 to 75 dBA CNEL at a distance of 50 feet from the centerline of the road, resulting in an increase in ambient noise levels between 6 to 9 dBA CNEL.
- Traffic noise levels along N Cornelia Avenue are expected to range from 66 to 71 dBA CNEL, resulting in an increase of 2 to 5 dBA CNEL in ambient noise levels.

Conditions of Approval for Traffic Noise - Exterior Environment

The following Condition of Approval should be implemented to minimize the impact associated with a substantial increase in ambient noise levels and to ensure compliance with the standards presented in Table 6.

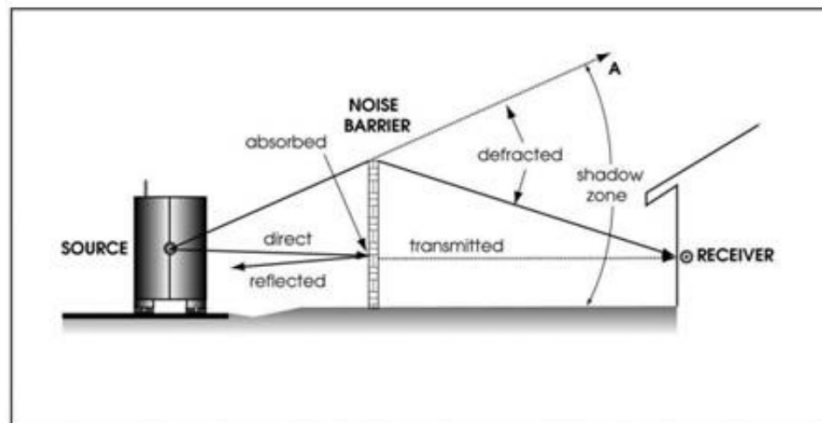
COP-3. Implement performance standards for noise reduction for new residential and noise sensitive uses exposed to exterior community noise levels from transportation sources above 65 dB Ldn or CNEL, as shown on Exhibit F: Cumulative Plus Project Noise Contours, or as identified by a project-specific acoustical analysis based on the target acceptable noise levels set in Table 6 in this report. If future exterior noise levels are expected to exceed the applicable standards presented in Table 6, the condition of approval presented below shall be implemented, as applicable. A qualified Acoustical Consultant shall provide information demonstrating that site specific mitigation will be effective at reaching the applicable noise standard.

- Install noise walls, berms and/or a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise

source and noise receptor. The City of Fresno has established a maximum allowable height of 15 feet.

Establishing distance between a noise source and a receiver is an effective way to reduce noise levels at the receiver. Traffic noise is not a single, stationary point source but a line source. Therefore a drop-off rate of 3 dB occurs with every doubling of distance from the receiver. The movement of a vehicle makes the noise source of the sound appear to be emanate from a line rather than from a point when viewed over a time interval.

As shown below, when a noise barrier is inserted between a noise source and receiver, the direct noise path along the line of sight between the two is interrupted. Some of the acoustical energy will be transmitted through the barrier material and continue to the source, although at a reduced level. The amount of this reduction depends on the material's mass and rigidity, and is called the transmission loss (TL), which is expressed in decibels. To be effective, noise barriers need to be solid, without holes and cracks. Concrete walls and earthen berms tend to provide the most noise attenuation, but other materials can be used. The exact amount of reduction provided by a barrier will range depending on the material, location and height of the barrier but barriers can be used to mitigate significant noise impacts to sensitive receptors in outdoor activity areas.



Source: Caltrans 2013a

7.1.3 Rail Noise (Non-CEQA)

Noise associated with the existing Union Pacific Railroad (UPRR) line is expected to remain the same or end altogether. The California High-Speed Train Project (CAHST), which is currently under construction east of State Route 99 will introduce more noise into the eastern portion of the Plan Area. According to the Noise and Vibration Technical Report prepared for the Merced to Fresno Section of the High Speed Train (CAHST, FRA 2012), trains in the Fresno area are expected to result in noise levels between 65 to 76 dB Ldn at nearby receptors. All of the receptors to be moderately or severely impacted by the HST are located outside of the Plan Area to the east. CAHST noise is not expected to result in significant noise impacts within the Plan Area.

7.1.4 Airport/Aircraft Noise

Noise Contours associated with airports in the vicinity of the Plan Area are not expected to encroach into the Plan Area. The Plan Area is over 2 miles from any private or public airport. However, the Plan Area will continue to be affected by fly-over noise associated with the Fresno Yosemite International Airport, the Fresno-Chandler Downtown Airport, and the Sierra Sky Park Airport. Airport and aircraft noise is not expected to result in significant impacts in the Plan Area.

7.1.5 Agricultural Noise (Non-CEQA)

Development of the Specific Plan Area may result in the exposure of sensitive receptors to agricultural noise. Crop cultivation, however, is specifically exempt from compliance with the noise regulations presented in Section 15-2506 of the City of Fresno Municipal Code.

7.2 Future Interior Noise (Non-CEQA)

Interior noise levels at future land uses exposed to exterior noise levels exceeding 65 dBA CNEL may exceed the City's standards presented in Table 6 without mitigation.

Based on the data provided in the Environmental Protection Agency's (EPA) Protective Noise Levels (EPA 550/9-79-100, Nov 1979), standard homes in Southern California provide at least 12 dBA of noise exterior to interior noise attenuation with windows open and 20 dBA with windows closed. Therefore, residences would need to be exposed to exterior noise levels exceeding 65 dBA CNEL (45 dBA + 20 dBA = 65 dBA) to potentially exceed the interior noise standard of 45 dBA CNEL with windows closed. A windows closed condition is defined as: the interior noise level with the windows closed. Upgrades are required for residential structures that would experience interior noise levels exceeding the 45 dBA CNEL noise standard when windows are closed (e.g., higher grade of insulation in outdoor walls and/or double-paned windows and air condition units).

Conditions of Approval for Traffic Noise – Interior Noise Environment

COP-2. Prior to approval, site-specific noise analyses projects are required to fine-tune and finalize noise reduction features. The site-specific noise analyses must demonstrate the interior noise level will not exceed the City's 45 dBA CNEL noise limit.

A qualified Acoustical Consultant shall provide information demonstrating that site specific mitigation will be effective at reaching the applicable noise standard.

- Install noise walls, berms and/or a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise source and noise receptor. The City of Fresno has established a maximum allowable height of 15 feet.
- Utilize façades with substantial weight and insulation.
- stall sound-rated windows for primary sleeping and activity areas.
- Install sound-rated doors for all exterior entries at primary sleeping and activity areas.
- Install acoustic baffling of vents for chimneys, attic and gable ends.
- Install mechanical ventilation systems that provide fresh air under closed window conditions.

The aforementioned conditions are not exhaustive, and alternative designs may be approved by the City, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction.

8.1 Construction Noise

The Environmental Protection Agency (EPA) has compiled data regarding the noise-generated characteristics of typical construction activities. The data is presented in Table 16. These noise levels would diminish rapidly with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 86 dBA measured 50 feet from the noise source would reduce to 80 dBA at 100 feet. At 200 feet from the noise source the noise level would reduce to 74 dBA. At 400 feet the noise source would reduce by another 6 dBA to 68 dBA. Contractors are required to comply with the City of Fresno's Noise Ordinance during construction described in Section 10-109.

Table 16: Typical Construction Noise Levels

Equipment Powered by Internal Combustion Engines	
Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Rollers)	73 - 76
Front Loaders	73 - 84
Backhoes	73 - 92
Tractors	75 - 95
Scrapers, Graders	78 - 92
Pavers	85 - 87
Trucks	81 - 94
Materials Handling	
Concrete Mixers	72 - 87
Concrete Pumps	81 - 83
Cranes (Movable)	72 - 86
Cranes (Derrick)	85 - 87
Stationary	
Pumps	68 - 71
Generators	71 - 83
Compressors	75 - 86
Impact Equipment	
Type	Noise Levels (dBA) at 50 Feet
Saws	71 - 82
Vibrators	68 - 82
Notes: Source: Reference Noise Levels from the Environmental Protection Agency (EPA)	

8.1.1 Construction Traffic

The proposed project would result in short-term noise impacts associated with construction activities. Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commute and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Truck traffic associated with project construction should be limited to within the permitted construction hours, as listed in the City's Municipal Code. Although there would be a relatively high single-event noise exposure potential at a maximum of 87 dBA L_{max} at 50 ft from passing trucks, causing possible short-term intermittent annoyances, the effect on ambient noise levels would be less than 1 dBA when averaged over one hour or 24 hours. In other words, the changes in noise levels over 1 hour or 24 hours attributable to passing trucks would not be perceptible to the normal human ear. Therefore, short-term construction-related impacts associated with worker commute and equipment transport on local streets leading to the project site would result in a less than significant impact on noise-sensitive receptors along the access routes.

8.1.2 Construction Activities

The site preparation phase, which includes grading and paving, tends to generate the highest noise levels, since the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, 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. Construction of the proposed project is expected to require the use of scrapers, bulldozers, motor grader, and water and pickup trucks. Noise associated with the use of construction equipment is estimated to reach between 79 and 89 dBA L_{max} at a distance of 50 ft from the active construction area for the grading phase. The maximum noise level generated by each scraper is assumed to be approximately 87 dBA L_{max} at 50 ft from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by the sound sources with equal strength increases the noise level by 3 dBA. The worst-case combined noise level during this phase of construction would be 91 dBA L_{max} at a distance of 50 ft from an active construction area. Noise reduction potential will be project and site specific. Section 8.3 outlines measures would reduce noise impacts during the project construction.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels will be loudest during grading phase. A likely worst-case construction noise scenario during grading assumes the use of a grader, a dozer, and two (2) excavators, two (2) backhoes and a scrapper operating at 50 feet from the nearest sensitive receptor.

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels at 50 feet have the potential to reach 90 dBA L_{eq} and 92 dBA L_{max} at the nearest sensitive receptors during grading. Noise levels for the other construction phases would be lower and range between 85 to 90 dBA.

Measures to minimize construction noise impacts associated with Plan Area development are listed below.

1. Construction must follow the City's Municipal Noise Code Section 10-109 which exempts construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.
2. Truck traffic associated with project construction should be limited to within the permitted construction hours, as listed in the City's Municipal Code above.
3. Stationary construction noise sources such as generators or pumps should be located at least 300 feet from sensitive land uses, as feasible.
4. Construction staging areas should be located as far from noise sensitive land uses as feasible.
5. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices. The use of manufacturer certified mufflers would generally reduce the construction equipment noise by 8 to 10 dBA.
6. Idling equipment shall be turned off when not in use.
7. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

8.2 Construction Vibration

The effects of vibration on structures have been the subject of extensive research. The Federal Transit Administration has compiled data regarding the vibration levels for various construction equipment and activities, which is detailed in Table 17. The Transportation and Construction Induced Vibration Guidance Manual for the California Department of Transportation has various recommended vibration thresholds for various types of projects and land uses. According to the Konan Vibration Criteria for Historic and Sensitive Buildings, the criteria for transient vibration sources should not exceed 0.3 peak particle velocity (PPV) (Section 6 – Structures, Table 11). 0.035 inches per second is barely perceptible. Construction activities can produce vibration that may be felt by adjacent land uses. Construction of the proposed project is unlikely to require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary source of vibration during construction will likely be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second PPV at 25 feet. The use of vibratory equipment should be evaluated on a project-by-project basis. As shown in Table 5, a peak particle velocity (PPV) of 0.20 is the threshold at which there is a risk of "architectural" damage to normal dwellings. It is also the level at which ground-borne vibration is annoying to people in buildings. Impacts would be significant if construction activities result in ground-borne vibration of 0.20 or higher at sensitive receptors. Mitigation measures to reduce construction-related ground-borne vibration are presented below.

Table 17: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity	Approximate Vibration Level
	(inches/second) at 25 feet	LV (VdB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.		

Mitigation Measure to Reduce Impacts Related to Construction Generated Ground-borne Vibration

MM-3. If it is necessary to operate pile drivers within 200 feet of existing buildings or vibratory rollers within 50 feet of existing buildings, an additional analysis shall be conducted by a noise and vibration specialist prior to project approval, in order to evaluate potential ground-borne vibration impacts to existing structures and sensitive receptors; and to recommend additional mitigation measures as necessary.

9.0 CEQA Analysis

The California Environmental Quality Act Guidelines (Appendix G) establishes thresholds for noise impact analysis as presented below:

(a) Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise Code, or applicable standards of other agencies?

Transportation Noise Impacts

Traffic noise will be significant if levels are increased by more than 3 dBA to levels above 65 dBA CNEL in areas with sensitive uses as defined by the General Plan. Compared to existing traffic noise levels, Cumulative plus Project traffic volumes are expected to be up to 13 dBA CNEL louder than existing ambient noise levels at existing land uses and will result in substantial increases in ambient noise along the analyzed roadways (see Table 15).

Implementation of the proposed Project will result in significant impacts related to exceedances of the land use compatibility criteria. ***Where existing land uses will be impacted, the impact would be significant.***

Stationary Noise Sources

Stationary noise will be significant if it exceeds the levels outlined in the Fresno Municipal Code and General Plan as outlined in Section 4.3. Implementation of the Project may result in stationary noise impacts from future uses. Implementation of good land use planning and policies and actions can minimize noise impacts related to these sources by avoiding the placement of noise-generating equipment near noise-sensitive land uses and, where unavoidable, include design measures to the degree practical to avoid violating the noise criteria presented in Section 4.3. ***Stationary noise impacts can be mitigated to “less than significant” with implementation of the noise regulations in the Fresno Municipal Code and General Plan as laid out in MM-1 and MM-2.***

Construction Noise and Vibration

Construction noise will be significant if construction occurs outside of the hours specified in Section 10-109 of the Fresno Municipal Code. The potential impact is site-specific and depends on the construction equipment used and distance to adjacent sensitive receptors. Implementation of the proposed Project could result in short-term noise impacts associated with construction activities. Two types of short-term noise impacts could occur during construction activities, on-site and off-site.

Construction crew commute and the transport of construction equipment and materials to the site for the proposed Project would incrementally increase noise levels on access roads leading to the site. Truck traffic associated with project construction should be limited to within the permitted construction hours, as listed in the City’s Municipal Code. Although there would be a relatively high single-event noise exposure potential at a maximum of 87 dBA L_{max} at 50 ft from passing trucks, causing possible short-

term intermittent annoyances, the effect on ambient noise levels would be less than 1 dBA when averaged over one hour or 24 hours. In other words, the changes in noise levels over 1 hour or 24 hours attributable to passing trucks would not be perceptible to the normal human ear. ***Therefore, short-term construction-related impacts associated with worker commute and equipment transport on local streets leading to the project site would result in a less than significant impact on noise-sensitive receptors along the access routes. No mitigation is required.***

The site preparation phase of on-site construction activities, which includes grading and paving, tends to generate the highest noise levels since the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, 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. Site-specific construction activities associated with future development are expected to require the use of scrapers, bulldozers, motor graders, and water and pickup trucks. The maximum noise level generated by each scraper is assumed to be approximately 87 dBA L_{max} at 50 ft from the scraper in operation. Each bulldozer would also generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by the sound sources with equal strength increases the noise level by 3 dBA. Noise reduction potential will be Project and site-specific, however. Construction noise level projections for each of the 15 parcels are provided in Appendix D. ***Implementation of Section 10-109 of the Municipal Code during site-specific projects will reduce the impact to less than significant.***

b) Generate excessive ground-borne vibration or ground-borne noise levels?

Construction vibration within the Project Area is not anticipated to be significant unless an individual development uses pile driving or vibratory rollers. These impacts can be avoided by requiring vibration impact studies when construction utilizes pile drivers within 200 feet of existing buildings or vibratory rollers within 50 feet of existing buildings. ***This impact would be less than significant with the implementation of mitigation measure MM-3.***

10.0 References

California, State of, Building Standards Commission

2019 California Uniform Building Code (UBC), Title 24.

California Department of Transportation (Caltrans)

1995 California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELS) in STAMINA 2.0. Technical Advisory, Noise TAN 95-03.

2002 California Airport Land Use Planning Handbook.

2013a Technical Noise Supplement to the Traffic Noise Analysis Protocol.

2013b Transportation and Construction Vibration Guidance Manual. September.

2018 Caltrans Traffic Counts <https://dot.ca.gov/programs/traffic-operations/census>

California High Speed Train Project

2010 High Speed Train Sound Fact Sheet

Environmental Protection Agency (EPA)

1974 Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Prepared by the EPA, Office of Noise Abatement and Control.

Federal Transit Administration

2006 Transit Noise and Vibration Impact Assessment. Typical Construction Equipment Vibration Emissions. FTAVA-90-1003-06.

Federal Railroad Administration

2006 Create Rail Noise Model

2012 Noise and Vibration Technical Report prepared for the Merced to Fresno Section of the High Speed Train

2020 <https://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Crossing.aspx>

Office of Planning and Research, State of California

2017 Office of Planning and Research, General Plan Guidelines.

Fresno, City of

2014 City of Fresno General Plan Noise Element.

2017 City of Fresno Code of Ordinance

Appendix A:
SoundPLAN Data

Appendix B:
Noise Measurement Data and Field Sheets

Appendix C:
FHWA Roadway Noise Worksheets

APPENDIX G

Technical Memorandum – Transportation CEQA Impacts and Mitigations

TECHNICAL MEMORANDUM

Fresno Specific Plan of the West Area

CEQA Impacts and Mitigations

Date:	October 29, 2024	Project #: 23674
To:	Elise Laws, De Novo Planning Group	
From:	Anusha Musunuru, Mike Aronson, Ruimin Lin, Kittelson & Associates, Inc.	

This memorandum presents the findings of the transportation impact analysis conducted for the Fresno Specific Plan of the West Area (herein referred to as the “Specific Plan”). The proposed Specific Plan will establish the land use planning and regulatory guidance, including the land use and zoning designations and policies, for the approximately 6,097-acre Specific Plan Area. The Specific Plan Area is triangular in shape and located west of State Route 99. It is bounded on the south by West Clinton Avenue, and to the west by Grantland and Garfield Avenues (Figure 1). The Specific Plan Area includes the southwest portion of Highway City adjacent to State Route 99. The Specific Plan will serve as a bridge between the Fresno General Plan and individual development applications in the Specific Plan Area.

The Specific Plan seeks to provide for the orderly and consistent development that promotes and establishes the West Area as a complete neighborhood with enhanced transportation infrastructure, development of core commercial centers, creation of additional parkland, and encouraging the development of a diverse housing stock. The Specific Plan Area does not currently have needed commercial amenities, forcing residents to travel east of State Route 99 for retail services. The Specific Plan Area also lacks a complete roadway network and parkland.

Ultimately, the Specific Plan will provide the blueprint to develop up to 83,129 dwelling units (DU) (including 49,355 DU in the residential land use category and 33,774 DU in the mixed-use land use category) and 59,777,271.15 square feet (SF) of non-residential uses. The proposed land use plan also designates public facility uses that are currently existing within the Specific Plan Area, including schools and churches.



KITTELSON
& ASSOCIATES

EXISTING CONDITIONS

A description of the existing roadway, transit, bicycle, and pedestrian components of the transportation system within the Specific Plan Area follow.

Roadway Network

The existing roadway network in the Specific Plan Area is composed of a street system made up of freeways, super arterials, arterial and collector roads. Roadway classifications listed are from the City of Fresno General Plan.

Freeways

State Route 99 (SR-99) is a six-lane freeway with a posted speed limit of 65 miles per hour. The northwest-southeast freeway connects most major cities in Central California including Chico, Bakersfield, Selma, Sacramento, Modesto, and Fresno. It also provides access to the greater freeway network with direct connections to State Route 180 and State Route 41.

The Project is bordered by SR-99 on the northeast side. The average daily traffic on SR-99 near the Project site ranges between approximately 82,000 and 112,000 vehicles per day. Bicyclists and pedestrians are not allowed on this facility.

Super Arterials

Grantland Avenue is a two-lane to four-lane north-south roadway with a posted speed limit of 40 miles per hour near the Project site. The facility extends from I-99 on the north to Kearny Blvd on the south. The facility is a four-lane roadway with a median north of Shaw Avenue, and a two-lane roadway south of Shaw Avenue. Sidewalks are limited, and additional sidewalks, Class I and Class II bikeways are planned along the roadway.

Veterans Boulevard opened in 2023 and is a six-lane super arterial in northwest Fresno connecting Herndon Avenue in the north to Shaw Avenue in the south. It includes an interchange with SR 99.

Arterials

Polk Avenue is a two-lane north-south roadway with a posted speed limit of 35 or 40 MPH near the Plan Area. The facility extends from SR-99 on the north to Olive Avenue on the south. Sidewalks and Class II bike lanes exist intermittently and are proposed along the roadway.

Shaw Avenue is a two-lane east-west roadway with a posted speed limit of 35 to 45 MPH near the Plan Area. The facility extends from the San Joaquin River on the west to the Friant-Kern Canal on the east. Sidewalks and Class II bike lanes are proposed along the roadway.

Ashlan Avenue is a two-lane to four-lane east-west roadway with a posted speed limit of 40 to 50 MPH near the Plan Area. The facility extends from Grantland Ave on the west and becomes Watts Valley Road on the east. Sidewalks and Class II bike lanes exist intermittently and are proposed along the roadway.

Grantland Avenue north of Shaw Avenue is a two lane north-south roadway with a posted speed limit of 40 MPH in the Plan Area. North of Shaw Avenue, Grantland Avenue extends north to SR 99 near the Herndon Avenue interchange. There are some sidewalks and bicycle facilities on this roadway.

Blythe Avenue from Ashlan Avenue to Dakota Avenue is a two lane north-south roadway with a center median located along most of its length. The speed limit is posted as 40 MPH. Sidewalks are generally available along frontages that have been developed but no sidewalks are present along undeveloped parcels. Class II bicycle lane exist intermittently in both the northbound and southbound directions.

Collectors

Collectors in the Specific Plan Area include the following:

- North-South
 - Garfield Avenue
 - Bryan Avenue
 - Hayes Avenue
 - Cornelia Avenue
 - Blythe Avenue
 - Brawley Avenue
 - Valentine Avenue
 - Marks Avenue
- East-west
 - Bullard Avenue
 - Barstow Avenue
 - Gettysburg Avenue
 - Dakota Avenue
 - Shields Avenue
 - Clinton Avenue

Collectors are generally two-lane roadways with posted speeds of 30 to 45 miles per hour. Sidewalks and bike lanes are generally not present but are proposed along most collectors.

Transit Facilities

Fresno is primarily served by the Fresno Area Express (FAX) transit system which operates bus service and paratransit operations servicing the city. Regional connections are provided by the Fresno County Rural Transit Agency (FCRTA) and Amtrak for travel outside of the Fresno-Clovis Metropolitan Area.

Fresno Area Express (FAX)

FAX provides the principal bus service in the city of Fresno. It operates 18 fixed-route bus lines and Handy Ride paratransit service. The fixed-route fleet is over 100 buses, and the Handy Ride fleet is over 50 vehicles.

Fixed-Route Service

FAX operates three routes that directly serve the Specific Plan Area through curbside bus stops. Bus service on these routes is detailed in Table 1 with the routes near the Specific Plan Area shown in Figure 2.

Route 12 provides local commuter and weekend service with the route originating or terminating at Shields Avenue/Brawley Avenue and San Jose Avenue/Marty Avenue intersections where it converts into Route 35. Between these two origin/destinations, the route has fixed stops as it runs mostly along Brawley Avenue and Cornelia in the Plan Area, from Clinton Avenue to Shaw Avenue. Key destinations served include Central High School, Inspiration Park, and Forestiere Underground Gardens.

Route 35 provides local commuter and weekend service with the route originating or terminating in the Plan Area at Shields Avenue/Brawley Avenue where it converts into Route 12 and on the east side of Fresno at the intersection of Belmont Avenue/Clovis Avenue. In the Plan Area, the route provides fixed stops along Brawley and Clinton Avenues. Key destinations served by the route include the DMV, Talking Book Library, Post Office, and the Social Security Office.

Route 39 provides local commuter and weekend service with the route originating or terminating at Brawley Avenue/Shields Avenue intersection and Fresno Yosemite International Air Terminal. Between these two origin/destinations, Route 39 runs in a loop from Clinton Avenue/Marks Avenue to Brawley Avenue/Shields Avenue in the Plan Area where it has fixed stops. Key destinations served include Fresno High School, Fresno City College, Veteran's Medical Center, and Alliant University.

Route 45 provides local weekday commuter and weekend service with the route originating or terminating in the Plan Area at Ashlan Avenue/Bryan Ave (Glacier Point Middle School) and on the east side of Fresno at the intersection of Fowler/Shields. In the plan area, the route provides fixed stops along Ashlan Avenue. Key destinations served by the route include Justin Garza High School, Glacier Point Middle School, Central East High School, and Blackbeard's Family Entertainment. Paratransit Service

Table 1: Bus Routes Serving the Project

Route	Serving	Day	Times		Frequency
12 & 35	Starting at Shaw and Brawley and serving Forestiere Underground Gardens, Teague Elementary School, Inspiration Park, Central High School East, Tower District, DMV, Roeding Park, Yosemite Middle School, and Social Security Office	Weekday	6:00 AM	10:00 PM	Every 30 Minutes
		Weekend	7:00 AM	7:30 PM	Every 30 Minutes
39	Starting at Brawley Avenue/ Shields Avenue and serving Hamilton K-8, Fresno High School, Fresno City College, VA Medical Center, McLane High School, Alliant University, and Fresno Yosemite International Air Terminal primarily along Clinton Avenue	Weekday	5:30 AM	10:00 PM	Every 30 Minutes
		Weekend	7:30 AM	7:00 PM	Every 30 Minutes
45	Along Ashlan Avenue serving Central High School East, Copper Middle School, Blackbeard’s Family Entertainment, Army Navy Reserve, and ARC Fresno Production Center	Weekday	6:00 AM	9:00 PM	Every 45 Minutes
		Weekend	6:45 AM	7:00 PM	Every 45 Minutes
Source: FAX website, www.fresno.gov/fax , accessed March 9, 2021 Kittelson & Associates, Inc., 2021					

Paratransit

Handy Ride is a shared ride, curb-to-curb service, provided from any origin to any destination throughout the service area for any trip purpose. Handy Ride operates during the same hours and days as the FAX fixed-route bus system. The service area boundaries for the FAX Handy Ride service are generally Copper Avenue to the north, east to Willow Avenue, south to Ashlan Avenue, east to Temperance Avenue, south to Central Avenue, west to Polk Avenue, north to the Fresno County line, and east to Copper Avenue.

Truck Facilities

There are designated truck routes in the Specific Plan Area according to the City of Fresno Public Works. There are also County Permit routes in the Specific Plan Area which are the overweight vehicle corridors requiring special permit. Existing and future truck routes are shown in Figure 3.

[illegible]

Legend:

- Project Boundary
- Existing Route
- Future Planned Route

Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities are important components of the transportation network in the Specific Plan Area. They not only offer non-vehicular opportunities for both commute and recreational trips but also provide connections to the region's transit network.

Existing Bicycle Facilities

Bicycle facilities are defined by the following four classes¹:

- **Class I** – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with vehicular crossing points minimized.
- **Class II** – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.
- **Class III** – Provides a right-of-way with signs or permanent markings and shared with pedestrians and motorists.
- **Class IV** – Provides a restricted right-of-way designated lane for the exclusive use of bicyclists that is separated by a vertical element to provide further separation from motor vehicle traffic.

The City of Fresno adopted the Active Transportation Plan (ATP) in March 2017. This plan identifies existing and future planned bicycle facilities within the City's jurisdiction.

The following bikeways are currently present within the study area at intermittent locations on major roads. They are shown graphically in Figure 4:

- **Class II Bike Lanes**
 - East/West Streets
 - Bullard Avenue, east of Grantland Avenue
 - Barstow Avenue, west of Grantland Avenue
 - Gettysburg Avenue, east of Hayes Avenue
 - Ashlan Avenue, east of Cornelia Avenue
 - Dakota Avenue, east of Polk Avenue
 - Clinton Avenue, east of Cornelia Avenue
 - North/ South Streets
 - Grantland Avenue, south of SR-99
 - Bryan Avenue, south of Gettysburg Avenue
 - Hayes Avenue, south of Shaw Avenue
 - Polk Avenue, south of Shaw Avenue
 - Cornelia Avenue, south of Gettysburg Avenue

¹ As detailed in Chapter 1000 of the Highway Design Manual (Caltrans, 2015).

- Brawley Avenue, south of Dakota Avenue

Planned and Proposed Bicycle Facilities

The ATP includes planned and proposed bikeway facilities in the Plan Area. They are discussed below and shown in Figure 4:

- **Streets with Class I Bike Paths**
 - Grantland Avenue
 - Veteran's Boulevard
 - Gettysburg Avenue
 - Garfield Avenue
 - Bullard Avenue
 - Parkway Drive
- **Streets with Class II Bike Lanes**
 - All arterials and collectors

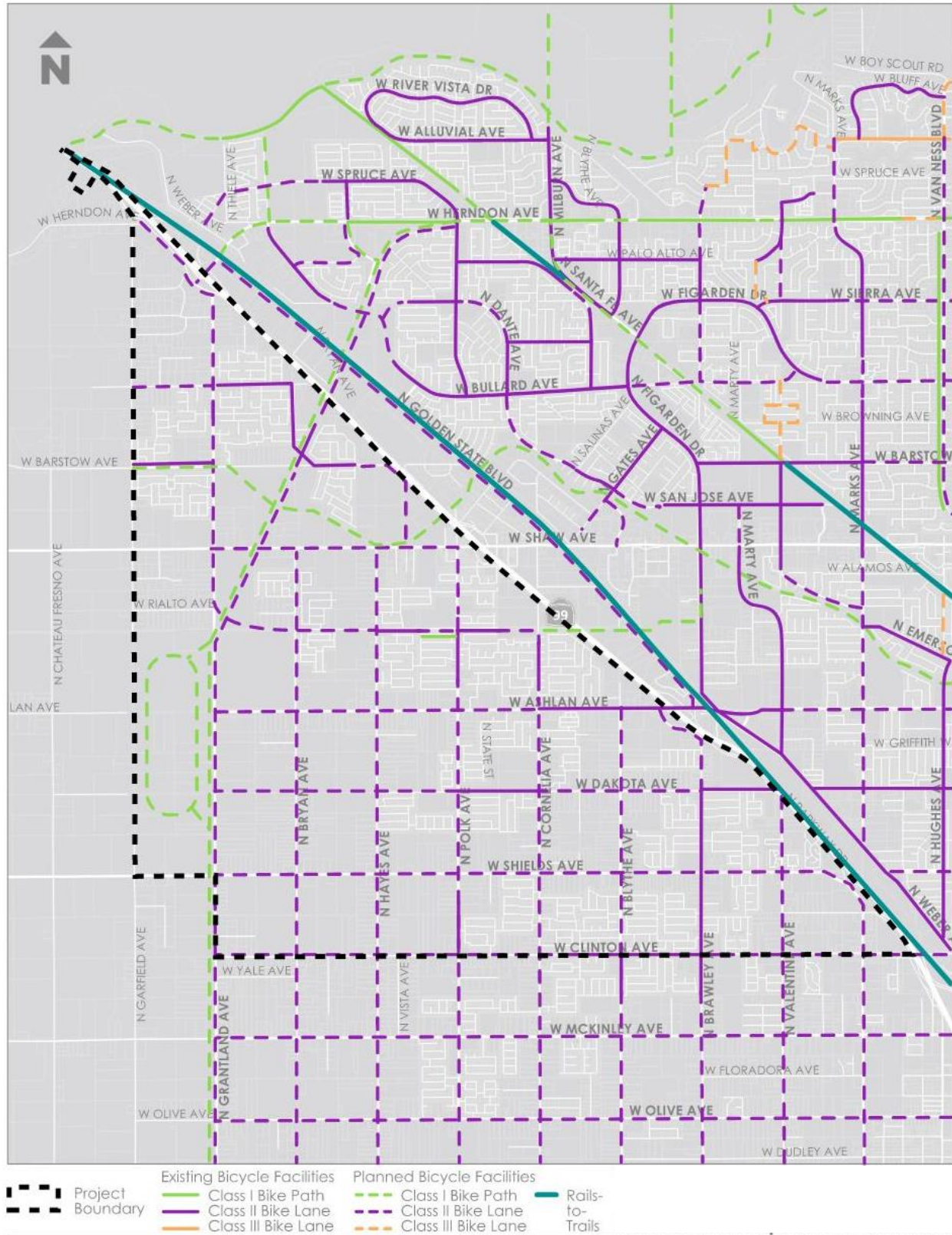
Class II Bike Lanes are planned along all arterials and collectors. Bike lanes on Veterans Boulevard, Gettysburg Avenue, and Cornelia Avenue are identified as priority bikeways in the ATP.

Pedestrian Facilities

Pedestrian facilities are present in the Specific Plan Area. Sidewalks are present intermittently along some major roadways. Sidewalks are proposed on most arterials and collectors. Crosswalks are present intermittently at signalized and unsignalized intersections in the Specific Plan Area. Figure 5 shows existing and planned sidewalks in the Specific Plan Area.

The City of Fresno adopted the 2016 Update to the ADA Transition Plan for the Right of Way (ROW) in February 2016. The ROW Transition Plan incorporates retrofitting Curb Ramps, Sidewalks, and Accessible Pedestrian Signals and replaced the 2003 Amended Curb Ramp Transition Plan.

Figure 4: Existing and Proposed Bicycle Routes in the Specific Plan Area



[illegible]

REGULATORY SETTING

This section summarizes applicable federal, state, regional, and local plans, laws, and regulations that are relevant to this analysis. This information provides a context for the discussion related to the Project's consistency with applicable policies, plans, laws, and regulations.

Federal

No federal plans, policies, regulations, or laws pertaining to transportation have been determined to be applicable to this Project.

State

Senate Bill 743 (SB 743) was signed into law in September 2013. Senate Bill 743 (Steinberg, 2013) required changes to the CEQA Guidelines regarding the analysis of transportation impacts. Historically, CEQA transportation analyses of individual projects determined impacts in the circulation system in terms of roadway delay and/or capacity at specific locations. SB 743 changes include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. Those proposed changes identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. Since the bill has gone into effect, automobile delay, as measured by "level of service" and other similar metrics, no longer constitutes a significant environmental effect under CEQA. Auto-mobility (often expressed as "level of service") may continue to be a measure for planning purposes.²

In December 2018, the California Governor's Office of Planning and Research (OPR) and the State Natural Resources Agency submitted updated CEQA Guidelines to the Office of Administrative Law for final approval to implement SB 743. The Office of Administrative Law approved the updated CEQA Guidelines, thus implementing SB 743 and making VMT the primary metric used to analyze transportation impacts. The final text, final statement of reasons, and related materials are posted at <http://resources.ca.gov/ceqa>. The changes have been approved by the Office of the Administrative Law and are now in effect. For land use and transportation projects, SB 743-compliant CEQA analysis became mandatory on July 1, 2020.

² Governor's Office of Planning and Research, 2016. Technical Advisory on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013)

Regional

Fresno Council of Governments

The Fresno COG is a voluntary association of local governments and a regional planning agency comprised of 16 member jurisdictions, including the City of Fresno. The members are represented by a Policy Board consisting of mayors of each incorporated city, and the Chairman of the County Board of Supervisors, or their designated elected official. The Fresno COG's purpose is to establish a consensus on the needs of the Fresno County area and further action plans for issues related to the Fresno County region. The current regional transportation plan, known as the Fresno County Regional Transportation Plan & Sustainable Communities Strategy (RTP-SCS) (2046), was adopted in 2022. The RTP addresses the mobility needed to keep regions moving and communities connected. Fresno COG's 2022 RTP addresses new requirements for reducing GHG emissions and other air emissions related to transportation, with the goal of providing transportation choices that enhance residents' quality of life. The plan specifies how funding will be sourced and financed for the region's planned transportation investments, ongoing operations, and maintenance. The goals, objectives, and policies of the RTP are established to direct the courses of action that will provide efficient, integrated multimodal transportation systems to serve the mobility needs of people, including accessible pedestrian and bicycle facilities, and freight, while fostering economic prosperity and development, and minimizing mobile sources of air pollution. The 2022 RTP vision, goals, and policies have been streamlined to focus on five key policy areas:

- Equity;
- Sustainability and Resiliency;
- Infrastructure and Safety;
- Economy; and
- Innovation.

Fresno County Congestion Management Process

In June 1990, California voters approved legislation that required Congestion Management Plans (CMP) be developed in urbanized counties to address congestion on California's highways and roads. The Fresno County Congestion Management Process (CMP) implements this requirement and its responsibilities include providing information on transportation system performance and assess alternative strategies for alleviating congestion and improving mobility for people and goods to levels that meet State and local needs. The Fresno County CMP identifies four general objectives:

1. Optimize the transportation facilities through efficient system management;
2. Invest in strategies that reduce travel demand, improve system performance, increase safety, and provide effective incident management;
3. Reduce VMT by encouraging alternative modes of transportation and promotion of sustainable land use development; and

4. improve public transit, extend bicycle and pedestrian systems, and promote car-sharing and bike-sharing programs to facilitate the development of an integrated multimodal transportation system in the Fresno region

Local

City of Fresno 2035 General Plan

The City of Fresno adopted the Fresno General Plan³ in December 2014 as an update to the previous Fresno General Plan approved in 2002. It serves as the City's guide for the continued development, enhancement, and revitalization of the Fresno metropolitan area. The Fresno General Plan contains the following objectives and policies that are relevant to transportation and circulation:

Mobility and Transportation Element

Objective MT-1: Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.

- **Policy MT-1-d:** Integrate Land Use and Transportation Planning. Plan for and maintain a coordinated and well-integrated land use pattern, local circulation network and transportation system that accommodates planned growth, reduces impacts on adjacent land uses, and preserves the integrity of established neighborhoods.
- **Policy MT-1-f:** Match Travel Demand with Transportation Facilities. Designate the types and intensities of land uses at locations such that related travel demands can be accommodated by a variety of viable transportation modes and support Complete Neighborhoods while avoiding the rerouting of excessive or incompatible traffic through local residential streets.
- **Policy MT-1-g:** Complete Streets Concept Implementation. Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals.
- **Policy MT-1-m:** Standards for Planned Bus Rapid Transit Corridors and Activity Centers. Independent of the Traffic Impact Zones identified in MT-2-I and Figure MT-4, strive to maintain the following vehicle LOS standards on major roadway segments and intersections along Bus Rapid Transit Corridors and in Activity Centers:

³ City of Fresno General Plan 2035, December 18, 2014.

- LOS E or better at all times, including peak travel times, unless the City Traffic Engineer determines that maintaining this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
- Accept LOS F conditions in Activity Centers and Bus Rapid Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project. In accepting LOS F conditions, the City Traffic Engineer may request limited analyses of operational issues at locations near Activity Centers and along Bus Rapid Transit Corridors, such as queuing or left-turn movements.
- Give priority to maintaining pedestrian service first, followed by transit service and then by vehicle LOS, where conflicts between objectives for service capacity between different transportation modes occur.
- Identify pedestrian-priority and transit-priority streets where these modes would have priority in order to apply a multi-modal priority system, as part of the General Plan implementation

Objective MT-2: Make efficient use of the City's existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.

- **Policy MT-2-b:** Reduce Vehicle Miles Traveled and Trips. Partner with major employers and other responsible agencies, such as the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.
- **Policy MT-2-c:** Reduce VMT through Infill Development. Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportation corridors in order to reduce citywide vehicle miles travelled (VMT).
- **Policy MT-2-d:** Street Redesign where Excess Capacity Exists. Evaluate opportunities to reduce right of way and/or redesign streets to support non-automobile travel modes along streets with excess roadway capacity where adjacent land use is not expected to change over the planning period
- **Policy MT-2-e:** Driveway and Access Consolidation. Take advantage of opportunities to consolidate driveways, access points, and curb cuts along designated major roadways when a change in development or a change in intensity occurs or when traffic operation or safety warrants
- **Policy MT-2-f:** Optimization of Roadway Operations. Optimize roadway operations by continuing to expand the use of techniques such as the City's intelligent transportation system (ITS) to manage traffic signal timing coordination in order to improve traffic

operations and increase traffic-carrying capacity, while reducing unnecessary congestion and decreasing air pollution emissions. In order to facilitate roadway optimization and as a potential revenue source for the optimization, the following strategies need to be implemented:

- Dig Once Policy. Install conduit for telecommunications use when trenching or construction occurs.
 - Telecommunications Strategy. Develop a costing mechanism for allowing the use of excess conduit within the City for use by communication carriers. The Policy shall follow regulations of the California Public Utilities Commission.
 - Grant Funding. Pursue grant funding to assist in construction and/or implementation of fiber-optic or other telecommunication infrastructure for additional public services such as education, economic development, reaching underserved populations, and public safety communications.
- **Policy MT-2-g:** Transportation Demand Management and Transportation System Management. Pursue implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.
 - **Policy MT-2-i:** Transportation Impact Studies. Require a Transportation Impact Study (currently named Traffic Impact Study) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements.
 - When a project includes a General Plan amendment that changes the General Plan Land Use Designation.
 - When the project will substantially change the off-site transportation system (auto, transit, bike or pedestrian) or connection to the system, as determined by the City Traffic Engineer.
 - Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development. The four zones, as defined on Figure MT-4, are listed below. The following criteria apply:
 - Traffic Impact Zone I (TIZ-I): TIZ-I represents the Downtown Planning Area. Maintain a peak hour LOS standard of F or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.

- Traffic Impact Zone II (TIZ-II): TIZ-II generally represents areas of the City currently built up and wanting to encourage infill development. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.
 - Traffic Impact Zone III (TIZ-III): TIZ-III generally represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips.
 - Traffic Impact Zone IV (TIZ-IV): TIZ-IV represents the southern employment areas within and planned by the City. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIZ will be required for all development projected to generate 200 or more peak hour new vehicle trips.
- **Policy MT-2-l:** Region-Wide Transportation Impact Fees. Continue to support the implementation of metropolitan-wide and region-wide transportation impact fees sufficient to cover the proportional share of a development's impacts and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:
 - Regional transportation impacts of new development;
 - Regional highways, streets, rail, trails, public transportation, and goods movement system components, consistent with the General Plan, necessary to mitigate those impacts and serve projected demands;
 - Projected full lifetime costs of the regional transportation system components, including construction, operation, and maintenance; and
 - Costs covered by established funding sources.
 - **Policy MT-2-m:** Use VMT analysis for CEQA. Use Vehicle Miles Traveled (VMT) as the criteria for evaluating transportation impacts under the California Environmental Quality Act (CEQA), pursuant to Senate Bill 743. Level of Service (LOS) may still be used for planning purposes and implementation of Capital Improvement Projects; however, VMT shall be used for determining mitigation under CEQA beginning in July of 2020.

Objective MT-4: Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.

- **Policy MT-4-b:** Bikeway Improvements. Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments or routes where inadequate right-of-way is available.
- **Policy MT-4-d:** Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational and park areas, and employment centers

Objective MT-5: Establish a well-integrated network of pedestrian facilities to accommodate safe, convenient, practical, and inviting travel by walking, including for those with physical mobility and vision impairments.

- **Policy MT-5-a:** Sidewalk Development. Pursue funding and implement standards for development of sidewalks on public streets, with priority given to meeting the needs of persons with physical and vision limitations; providing safe routes to school; completing pedestrian improvements in established neighborhoods with lower vehicle ownership rates; or providing pedestrian access to public transportation routes
- **Policy MT-5-b:** Sidewalk Requirements. Assure adequate access for pedestrians and people with disabilities in new residential developments per adopted City policies, consistent with the California Building Code and the Americans with Disabilities Act.
- **Policy MT-5-d:** Pedestrian Safety. Minimize vehicular and pedestrian conflicts on both major and non-roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections
- **Policy MT-5-e:** Traffic Management in Established Neighborhoods. Establish acceptable design and improvement standards and provide traffic planning assistance to established neighborhoods to identify practical traffic management and calming methods to enhance the pedestrian environment with costs equitably assigned to properties receiving the benefits or generating excessive vehicle traffic

Objective MT-6: Establish a network of multi-purpose pedestrian and bicycle paths, as well as limited access trails, to link residential areas to local and regional open spaces and recreation areas and urban Activity Centers in order to enhance Fresno's recreational amenities and alternative transportation options.

- **Policy MT-6-g:** Path and Trail Development. Require all projects to incorporate planned multi-purpose path and trail development standards and corridor linkages consistent with the General Plan, applicable law and case-by-case determinations as a condition of project approval

Objective MT-8: Provide public transit options that serve existing and future concentrations of residences, employment, recreation and civic uses and are feasible, efficient, safe, and minimize environmental impacts.

- **Policy MT-8-a:** Street Design Coordinated with Transit. Coordinate the planning, design, and construction of the major roadway network with transit operators to facilitate efficient direct transit routing throughout the Planning Area.
- **Policy MT-8-c:** New Development Facilitating Transit. Continue to review development proposals in transportation corridors to ensure they are designed to facilitate transit. Coordinate all projects that have residential or employment densities suitable for transit services, so they are located along existing or planned transit corridors or that otherwise have the potential for transit orientation to FAX, and consider FAX's comments in decision-making

Objective MT-11: Achieve necessary capacity increasing and inter-modal connectivity enhancing improvements to the goods movement transportation system to support the growth in critical farm product and value added industries.

- **Policy MT-11-c:** Truck Route Designations. Continue to plan and designate truck routes within the Metropolitan Area to facilitate access to and from goods production and processing areas while minimizing conflicts with other transportation priorities

The General Plan also has policies related to maintaining acceptable Levels of Service (LOS). However, LOS can no longer be used for CEQA evaluations and is, therefore, not relevant to this section which focuses on CEQA impacts. Additional analyses of the Specific Plan will be documented in another report that will detail LOS.

City of Fresno Active Transportation Plan

The City of Fresno Active Transportation Plan (ATP)⁴ is a comprehensive guide that creates a vision for active transportation in the City of Fresno. It is an update to the City of Fresno Bicycle, Pedestrian, & Trails, Master Plan that was adopted in 2010. This plan lays out specific goals to improve bicycle access and connectivity in Fresno. These goals include the following:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno;
- Increase walking and bicycling trips in Fresno by creating user friendly facilities;
- Improve the geographical equity of access to walking and bicycling facilities in Fresno; and
- Fill key gaps in Fresno's walking and bicycling networks.

City of Fresno ADA Transition Plan for the Right of Way (ROW)

On February 25, 2016 the City Council adopted the 2016 Update to the ADA Transition Plan for the Right of Way (ROW). The ROW Transition Plan incorporates retrofitting Curb Ramps, Sidewalks, and Accessible Pedestrian Signals and replaces the 2003 Amended Curb Ramp Transition Plan. The goal of the ADA Transition Plan for the ROW is to ensure that the City maintains accessible paths of travel in the ROW for people with disabilities.

⁴ City of Fresno Active Transportation Plan, December 2016.

City of Fresno VMT Guidelines

The City of Fresno adopted their VMT guidelines on June 25, 2020⁵. This document serves as a detailed guideline for preparing VMT analysis consistent with SB 743 requirements for development projects, transportation projects, and plans. Key elements of these guidelines include:

- The County of Fresno was selected as the region for assessing VMT impacts. Therefore, all projects will compare their VMT metrics against the county averages.
- The guidelines state the following significant thresholds for land development projects in the City of Fresno:
 - 13 percent below existing regional average VMT per capita for residential projects
 - 13 percent below existing regional average VMT per employee for office projects
 - No net increase in VMT for retail projects.
- For land use plans such as specific plans and general plans, the guidelines compare the existing VMT per capita and/or VMT per employee for the region with the expected horizon year VMT per capita and/or VMT per employee for the land use plan. If there is a net increase in the applicable VMT metrics (VMT/capita and VMT/employee) under horizon year conditions, then the project will have a significant impact.

City of Fresno Active Transportation Plan

The City of Fresno Active Transportation Plan (ATP)⁶ is a comprehensive guide that creates a vision for active transportation in the city of Fresno. It is an update to the City of Fresno Bicycle, Pedestrian, & Trails, Master Plan that was adopted in 2010. The ATP lays out specific goals to improve bicycle access and connectivity in Fresno. The goals include the following:

- Equitably improve the safety and perceived safety of walking and bicycling in Fresno;
- Increase walking and bicycling trips in Fresno by creating user friendly facilities;
- Improve the geographical equity of access to walking and bicycling facilities in Fresno; and
- Fill key gaps in Fresno's walking and bicycling networks.

⁵ <https://www.fresno.gov/wp-content/uploads/2023/03/CEQA-Guidelines-for-Vehicle-Miles-Traveled-Final-Adopted-Version.pdf>

⁶ City of Fresno Active Transportation Plan, December 2016.

City of Fresno ADA Transition Plan for the Right of Way (ROW)

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City of Fresno Complete Streets Policy

The City of Fresno Complete Streets Policy (240.3)⁷ is drafted to solidify current city practices and ensure consistency in the application. This policy aids in the planning, design, and construction of transportation facilities that balance safety, access, and mobility for users of all abilities and ages. The policy includes the following components:

- A. Vision and Intent;
- B. Diverse Users;
- C. Commitment;
- D. Land Use and Context Sensitivity;
- E. Exceptions;
- F. Performance Measures; and
- G. Implementation.

⁷ <https://www.fresno.gov/wp-content/uploads/2023/04/Complete-Streets-091119.pdf>

TRANSPORTATION ANALYSIS

The transportation analysis assesses how the study area's transportation system would operate with the implementation of the proposed Specific Plan. This analysis includes effects that would result in significant impacts under the California Environmental Quality Act (CEQA) guidelines.

CEQA Significance Criteria

The Project's impact is not considered to be significant unless it would:

- a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- b. Conflict or be inconsistent with CEQA Guideline section 15064.3, subdivision (b).
- c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- d. Result in inadequate emergency access.

Significance criteria "b" is related to the implementation of vehicle miles traveled (VMT) as the primary performance metric. The following criteria are used to assess a significant impact related to VMT consistent with the City of Fresno "CEQA Guidelines for Vehicle Miles Traveled Thresholds" dated June 25, 2020:

- A proposed (residential) project exceeding a level of 13 percent below existing regional average⁸ VMT per capita may indicate a significant transportation impact.
- A similar threshold would apply to office projects (13 percent below existing regional average VMT per employee).
- VMT generated by retail projects would indicate a significant impact for any net increase in total VMT.
- Section 6 of the VMT guidelines includes Significance Criteria for Specific Plans: For land use plans such as the Specific Plan for the West Area, the recommended methodology for conducting VMT assessments is to compare the existing VMT per capita and/or VMT per employee for the region with the expected horizon year VMT per capita and/or VMT per employee for the land use plan. If there is a net increase in the VMT metric under horizon year conditions, then the project will have a significant impact.

⁸ The City of Fresno defines the region for applying these threshold as Fresno County

VMT Analysis

The Fresno Council of Governments' (Fresno COG) activity-based travel demand model was used to estimate existing average VMT per capita and VMT per employee for the Fresno County region and horizon year average VMT per capita and VMT per employee for the transportation analysis zones (TAZs) that comprise the Specific Plan Area. The number of dwelling units and employment for the Specific Plan Area were calculated at maximum buildout potential. The Fresno COG population synthesizer was used to estimate the demographic characteristics of individual households and persons within the Specific Plan Area and generate land use input files for the activity-based model. These land use input files were then used as input to the activity-based model to develop horizon year (2046) forecasts with the maximum buildout potential of the Specific Plan Area.

Two measures of VMT are used in this analysis:

- **VMT per capita for residential land uses.** Includes VMT for all trips produced by a dwelling unit's residents, such as to work, school, or shop, on a typical weekday.
- **VMT per employee for non-residential land uses.** Includes all trips made by employees at the non-residential land use on a typical weekday, not including visitors to the non-residential land use such as customers, patients, or deliveries.

Table 2 presents VMT per capita and VMT per employee findings for existing conditions in Fresno County and for the Specific Plan Area at buildout in the horizon year. Based on the City of Fresno VMT Guidelines, a specific plan would have a significant impact if the VMT per capita and VMT per employee of the Specific Plan Area exceeded the same metrics for existing conditions in the Fresno County region.

Table 2: VMT per Capita and VMT per Employee - Existing and Horizon Year Conditions

Trip Type	Fresno County (2019)	Impact Threshold for Individual Land Development Projects (13% below regional average)	Specific Plan Area (2046)	Percent Compared to Regional Average
VMT Per Capita	15.4	13.4	9.4	-39%
VMT Per Employee	25.1	21.9	27.3	+9%
<p>Note: These numbers are based on Fresno COG's Activity-Based Travel Demand Model, and the Land Use inputs obtained from Fresno COG's Population Synthesizer for horizon year 2046 assuming full buildout of the Fresno West area outlined in the specific plan</p> <p>Source: Fresno COG Travel Demand Model, Kittelson & Associates, 2024.</p>				

The VMT per capita in the Specific Plan Area would be lower than existing countywide conditions and lower than the impact threshold. The daily VMT per capita within the Specific Plan would be 9.4, 39 percent lower than the existing countywide average of 15.4 and 30 percent lower than the impact threshold of 13.4. The decrease in residential VMT per capita when compared to the Fresno County average would be the result of the increased retail and employment opportunities within the Specific Plan Area, resulting in shorter trips and/or possible greater use of non-auto modes.

The VMT per employee in the Specific Plan Area of 27.3 would be 9 percent higher than the existing countywide average of 25.1 and 25 percent higher than the impact threshold of 21.9. The VMT per employee would exceed the impact thresholds for employment land uses despite the mixed-use nature of the Specific Plan, most likely because the high amount of potential non-residential uses with full buildout of allowable used under the Specific Plan would attract additional long trips from outside of the Specific Plan area or Fresno County.

CEQA PROJECT IMPACTS AND PROPOSED MITIGATIONS

TRAF-1	The proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. This would be considered a less than significant impact.
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Development associated with the proposed Plan would increase the amount of multimodal transportation activity which would require the improvement and expansion of the local transportation network in the Specific Plan Area to serve the associated travel demand. The Specific Plan of the West Area Initiation Report includes the following guiding principles related to transit, bicycle and pedestrian travel:

- Accommodate and improve roadway access, connectivity and mobility among all modes of transportation, and prioritize roadway widening where bottlenecks exists.
- Accommodate planned transit services in the West Area by locating routes near or adjacent to the community centers, schools, parks, and retail centers.

These guiding principles are consistent with General Plan policies which detail how the circulation system will be improved to meet the needs of all users. Implementation of the proposed Specific Plan would promote the use of alternative transportation modes by accelerating development in the West Area which would in turn require development of a circulation system that address all user. General Plan policies that would have to followed to build out the Specific Plan and address transit, roadway, bicycle, and pedestrian travel are:

- **Policy MT-1-g** - Complete Streets Concept Implementation.
 - Requires transportation facilities be based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motor vehicle and transit users), meeting the transportation needs of all ages, income groups, and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals
- **Policy MT-1-m** - Standards for Planned Bus Rapid Transit Corridors and Activity Centers.
 - Requires intersections and roadways along transit corridor and in activity centers maintain acceptable operations to facilitate transit movement.

- **Policy MT-2-d** - Street Redesign where Excess Capacity Exists.
 - Requires roadways with extra capacity to be modified to “right size” the roadway.
- **Policy MT-4-b** - Bikeway Improvements.
 - Requires new development to set aside an adequate amount of right of way to construct bicycle facilities.
- **Policy MT-4-d** - Prioritization of Bikeway Improvements.
 - Prioritizes connections between existing facilities to complete a comprehensive bicycle network.
- **Policy MT-5-a** - Sidewalk Development.
 - Establishes a goal of developing sidewalks to improve connectivity to transit
- **Policy MT-5-b** - Sidewalk Requirements.
 - Requires sidewalks to be constructed to the latest standards
- **Policy MT-6-g** - Path and Trail Development.
 - Requires planned multi use paths be constructed along with new development
- **Policy MT-8-a** - Street Design Coordinated with Transit
 - Requires coordination with roadway design and transit to ensure an efficient public transportation system
- **Policy MT-8-c** - New Development Facilitating Transit.
 - Requires new development to facilitate transit.

Additionally, the Specific Plan has a strong emphasis on Complete Neighborhoods, which is a tool to achieve environmental justice. The concept of Complete Neighborhoods is to enable residents of Fresno to live in communities with convenient access to services, employment, and recreation within walking distance. It provides residents with amenities that make their neighborhood mostly self-sufficient and interconnected. According to the Specific Plan, planning for Complete Neighborhoods will help support the provision of resources to neighborhoods where they are currently lacking or are under-resourced. Section 5.4 of the Specific Plan includes a series of maps which show a reasonable walkshed from existing and planned schools; bus stops and trails; commercial uses; and parks and open space.

Since the guiding principles of the Specific Plan support the policies of the General Plan, no conflict with policies, plans, and programs for alternative transportation would occur from future development and redevelopment under the proposed Specific Plan of the West Area. Therefore, the impact would be less than significant and no mitigation measures would be required.

TRAF-2P	The proposed project would conflict with or be inconsistent with CEQA Guideline section 15064.3, subdivision (b). This would be considered a potentially significant impact.
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Table 2 on page 25 presented VMT per capita and VMT per employee findings for existing conditions in Fresno County and for the Plan Area at buildout in the horizon year. Based on the City of Fresno VMT Guidelines, a specific plan would have a significant impact if the VMT per capita and VMT per employee of the Specific Plan Area would exceed the Fresno County metrics for existing conditions.

VMT Per Capita

The VMT per capita in the Specific Plan Area would be 39 percent lower than the existing regional average and 30 percent lower than the impact threshold. This would be considered a less than significant impact for VMT per capita.

VMT Per Employee

VMT per employee in the Specific Plan Area would be 9 percent higher than existing conditions and 25 percent higher than the impact threshold. The Project would exceed the impact thresholds for employment land uses. This would be a **significant impact** for employment uses in the Specific Plan Area.

Mitigation

Mitigation measures for the VMT impacts of employment uses in the Specific Plan Area would be focused on reducing the number and/or lengths of vehicle trips by employees. The potential effectiveness of mitigation measures for VMT has been estimated using the CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*⁹.

Mitigation Measure TRAF-2-1: Large employers (greater than 100 employees) within the Plan Area shall implement feasible Transportation Demand Management (TDM) strategies in order to decrease daily commute vehicle trips by 9 percent compared to standard vehicle trip generation. Specific potential TDM strategies include, but are not limited to, the following:

⁹ California Air Pollution Control Officers Association (CAPCOA), *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, December 2021, https://www.airquality.org/ClimateChange/Documents/Final%20Handbook_AB434.pdf

- Implement subsidized, discounted, or free transit passes for employees. Employment developments should be accessible within 1 mile of high-quality transit service, 0.5 mile of local or less frequent transit service, or along a designated shuttle providing last-mile connections. This is consistent with the West Area Neighborhood Specific Plan (WANSP) which recommends large employers (having 100 or more employees) consider providing subsidized transit passes for employees. The CAPCOA Handbook Measure T-9 estimates that implementing subsidized, discounted, or free transit passes for employees could reduce VMT generated by employee vehicles accessing the sites by up to 5.5 percent.
- Provide bicycle facilities at land uses that would generate more than 500 daily person trips. Facilities may include bike parking, bike lockers, showers, and personal lockers. The CAPCOA Handbook Measure T-10 estimates that provision of end-of-trip bicycle facilities can reduce commute VMT by up to 4.4 percent depending on the existing propensity for commuters to use bicycles.
- Price workplace parking to increase the cost of parking on site. Characteristics of workplace pricing may include:
 - Explicitly charging for employee parking
 - Validating parking for only invited guest
 - Implement above market rate onsite parking
 - Not providing employee parking and transportation allowances.

Alternative modes of transportation that are convenient and have competitive travel times should be available such as transit services near the project site, shuttle service, or a complete active transportation network serving the site and the surrounding community. In addition, employers should educate employees about alternative modes of transportation. The CAPCOA Handbook Measure T-12 estimates by pricing workplace parking, VMT from employees commuting to the project site can be reduced to up to 20 percent. VMT reductions may not be combined with Measure T-14, *Implement Employee Cash Out* to avoid double counting.

- Implement employee parking cash-out to encourage employees to choose alternative modes of transportation. This measure requires employers to provide employees with the option of forgoing subsidized or free parking for a cash payment equivalent to or greater than the cost of the parking space. To prevent spill-over parking and use of single occupancy vehicles, residential parking must be available, and public on-street parking must be at market rate. The CAPCOA Handbook Measure T-13 estimates that implementing employee cash-out could reduce employee commute VMT by up to 12 percent. VMT reductions may not be combined with Measure T-13, *Price Workplace Parking* to avoid double counting.

- Provide a well-connected street network, particularly for non-motorized connections. Characteristics of street network connectivity include short block lengths, numerous three and four-way intersections, and minimal dead-ends (cul-de-sacs). Street connectivity helps to facilitate shorter vehicle trips and greater numbers of walk and bike trips and thus a reduction in VMT. The CAPCOA Handbook Measure T-17 uses increased vehicle intersection density as a proxy for street connectivity improvements. The CAPCOA Handbook estimates that VMT can be reduced up to 30 percent if a development provides a street grid that has much greater density (up to about three times) of streets and street intersections than the average American street grid density of 36 street intersections per square mile.
- Improve and enhance pedestrian networks to improve pedestrian access. This can be achieved by expanding the sidewalk coverage which may include but not be limited to building new sidewalks or improving degraded or substandard sidewalks. Pedestrian networks should be contiguous and link externally with existing and planned pedestrian facilities. Characteristics of an enhanced pedestrian networks include high-visibility crosswalks, pedestrian hybrid beacons, and other pedestrian signals, mid-block crosswalks, pedestrian refuge islands, speed tables, bulb-outs, curb ramps, signage, pavement markings, pedestrian-only connections and districts, landscaping, and other improvements to pedestrian safety. Walls, landscaping buffers, slopes, and unprotected crossings should be minimized.

This mitigation is consistent with the WANSP policy number IPR 1.4 and IPR 1.5. Policy number IPR 1.4 states that providing a connected, safe, and pleasant pedestrian experience can be achieved by requiring the installation of curbs, curb ramps, gutters, streetlights, sidewalks, and street trees on both sides of the street and adjacent to new developments. Policy number IPR 1.5 encourages the installation of pedestrian enhancing amenities to include sidewalks with the width of at least five to seven feet to allow for pedestrians to walk together or apart at a comfortable distance, benches shade greenery, and prominent gathering places. The CAPCOA Handbook Measure T-18 *Provide Pedestrian Network Improvement* can reduce VMT in the project site by up to 6.4 percent.

The TDM Plan shall be submitted to the City for review prior to approval of improvement plans, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if determined necessary by the City. The TDM Plan shall include the TDM strategies that will be implemented during the lifetime of the proposed Project and shall outline the anticipated effectiveness of the strategies. The anticipated effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City. The frequency and duration of the anticipated effectiveness would depend on the ultimate strategy determined in coordination with the City.

Mitigation Measure TRAF-2-2: The City of Fresno shall expand local transit networks by modifying, adding, or extending existing transit services to enhance the service within the Specific Plan Area. This

can be achieved by reducing the average wait time by increasing the service frequency, or by extending services to cover new areas and times. This mitigation measure is consistent with WANSF policy number IPR 1.8 which states that expanding transit services into the Fresno West Area as development occurs helps improve access, movement, and safety for all transportation modes in the West Area. This can be achieved by exploring the transit connectivity options near business districts to create a West Area-Downtown Connector Route. The CAPCOA Handbook Measure T-25 estimates that an improved transit network can reduce VMT produced in the project site by up to 4.6 percent.

Significance after Mitigation

VMT reduction depends on factors such as actual implementation of planned land use development, demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of transit relative to driving, which relates to congestion along vehicular commute routes that are not under the Project's jurisdiction, as well as transit provided by parties other than the Project or the city of Fresno. The feasibility and effectiveness of the mitigation measures is either insufficient or unknown at this time. The Project cannot demonstrate definitively that implementation of these policies would achieve VMT reductions to meet the VMT per employee thresholds. With implementation of the Plan and the recommended mitigation measures, this impact would remain **significant and unavoidable**.

TRAF-3	The proposed project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). This would be considered a less than significant impact.
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The Specific Plan is proposing to increase the density in the plan area compared to the City's General Plan but is not proposing to change the types (i.e., residential, commercial, office, etc.) of land uses in the area. The Specific Plan of the West Area Initiation Report includes the following guiding principles related to transportation and hazards:

- Provide a complete, safe, and well-maintained sidewalk network from residential neighborhoods to commercial centers, schools, parks, and community centers.
- Provide a complete, safe, and well-maintained roadway network that allows for efficient and smooth access from the West Area to other sections of the city and region.

Buildout of the proposed Specific Plan would result in some changes to the City's circulation network, but would not increase hazards or incompatible uses due to design features. All future roadway system improvements associated with development and redevelopment activates under the Specific Plan would be designed in accordance with the established roadway design standards, some of which have also been incorporated into the Circulation Element of the General Plan.

General Plan policies that would address design and safety issues are:

- **Policy MT-2-e** - Driveway and Access Consolidation.

- **Policy MT-2-i** - Transportation Impact Studies.
- **Policy MT-5-d** - Pedestrian Safety.
- **Policy MT-5-e** - Traffic Management in Established Neighborhoods

These improvements will be subject to review and future consideration by the City of Fresno. An evaluation of the roadway alignments, intersection geometrics, and traffic control features will be needed. Roadway improvements would have to be made in accordance with the City's Circulation Plan, roadway functional design guidelines, and would have to meet design guidelines such as the accessibility requirements of Title 24 (California Building Code), ADA standards, California Manual of Uniform Traffic Control Devices (MUTCD), and the Caltrans Roadway Design Manual.

Implementation of the Specific Plan would not result in hazardous conditions or create conflicting uses. With implementation of policies MT-2-e, MT-2-l, and application of the conditions of approval at the time of review of land development projects, the Specific Plan would be designed to ensure that no hazardous circulation conditions are created as a result of implementation of the proposed project. The Specific Plan would implement components of the roadway system consistent with the City's General Plan. Therefore, potential impacts related to hazards due to a geometric design feature or incompatible uses would be less than significant, and no mitigation measures would be required.

TRAF-4	The proposed project would result in inadequate emergency access. This would be considered a less than significant impact.
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Emergency response requires a balance of emergency response time and evacuation needs with other community concerns, such as urban design and traffic calming. Future roadway improvements associated with buildout of the Plan Area would be made in accordance with the City's Circulation Plan and roadway functional design guidelines.

With the application of the conditions of approval at the time of review of land development projects, the Specific Plan would be designed to ensure that adequate emergency access is provided. The Specific Plan would implement components of the roadway system consistent with the City's General Plan. Therefore, impacts related to inadequate emergency access would be less than significant, and no mitigation measures would be required.