4 COMPARISON OF ALTERNATIVES

4.1 Introduction

This chapter provides a comparative summary of the five project alternatives evaluated in detail in this Draft Environmental Impact Report (DEIR), as well as the No Project Alternative. Consistent with the California Environmental Quality Act (CEQA), the alternatives summarized here represent a reasonable range of options that could feasibly meet the basic objectives of the Sepulveda Transit Corridor Project (Project). Project objectives were derived from the Project's goals and objectives described in Chapter 2:

- Improve Mobility
- Improve Accessibility and Promote Equity
- Support Community and Economic Development
- Protect Environmental Resources and Support a Sustainable Transportation System
- Provide a Cost-Effective Solution and Minimize Risk
- Enhance Resiliency

This purpose of this chapter is to assist decision-makers and the public in evaluating potential trade-offs. For example, one project alternative may better address the Project's mobility objectives than another, but it may not be as successful at advancing Los Angeles Metropolitan Transportation Authority's (Metro) goals related to community and economic development, or it may have a greater impact on environmental resources. Comparing the alternatives with respect to performance measures, environmental impacts, and each of Metro's objectives will allow the public and decision-makers to assess such trade-offs.

Section 4.2 of this chapter discusses the project alternatives' performance in moving passengers through and within the Project Study Area to access major travel destinations, and their potential cost effectiveness in doing so. Section 4.3 evaluates project alternatives' effectiveness at meeting objectives related to the Project's goals of mobility, accessibility, community and economic development, protecting environmental resources, cost effectiveness, and enhancing the resiliency of the transportation network. Section 4.4 summarizes the environmental impacts of the project alternatives. Section 4.5 identifies the environmentally superior alternative. The final section provides other potentially relevant considerations with respect to selecting a preferred alternative.

As discussed in Section 2, Project Description, Alternative 6 is identified as the Proposed Project for the purposes of this EIR. The proposed technology, construction, and operation of Alternative 6 are familiar to the Metro Board of Directors and the public, because they are similar to Metro's existing heavy rail transit (HRT) lines, and they are consistent with the description of the Sepulveda Transit Corridor Project as presented to the public when the *Measure M Expenditure Plan* (Metro, 2016) was passed. This designation provides a finite and stable basis for comparison rather than a presumption of selection. This EIR evaluates all alternatives at an equal level of detail, providing a meaningful comparison of their environmental effects, consistent with CEQA Guidelines Section 15126.6(d). By analyzing all alternatives equally, this EIR is intended to help the Metro Board make an informed decision on the Locally Preferred Alternative (LPA) with a full understanding of its relative environmental impacts and benefits.

As previously noted, this chapter is intended to assist decision-makers and the public in evaluating the benefits and trade-offs of the alternatives; this includes providing summaries of the impact evaluations set forth in full in Chapter 3 of this EIR.

4.2 Performance and Cost

This section summarizes the performance and cost of each project alternative. Performance measures include headways (time between trains); daily, peak period, and off-peak period boardings at each station; peak loads (maximum number of passengers per hour at a single location); and cost. Headways are an important consideration because they are a key part of the user experience. Boardings represent the alternatives' effectiveness at the essential function of a transit line — moving people from place to place, both during peak hours and at other times of the day. Cost helps the public assess the relative value of each alternative considering its success at achieving the Project's objectives.

Table 4-1 presents the alignment length, number of stations, and end-to-end travel time (including dwell time at stations) of each project alternative. Alternative 6 (the Proposed Project) is the shortest alternative, with a length of 12.9 miles, and has the least number of stations, seven. Alternative 6 also has the shortest end-to-end travel time between the Metro E Line and the Van Nuys Metrolink Station. Alternatives 1, 3, 4, and 5 provide a station at Sherman Way, which Alternative 6 does not. Alternatives 1 and 3 also provide a station at the Getty Center. All of the alternatives except Alternative 1 provide a rail station on the University of California, Los Angeles (UCLA) campus. Alternative 1 serves UCLA via an electric bus connection from its Wilshire Boulevard/Metro D Line Station near the VA Medical Center.

Table 4-1. Summary of Stations and Alignment by Project Alternative

	Alt 1[a]	Alt 3	Alt 4	Alt 5	Alt 6
Length (miles)	15.1	16.1	13.9	13.8	12.9
Number of stations	8	9	8	8	7
End-to-end travel time[b] (includes dwell time) (MM:SS)	27:54	32:35	20:10	19:36	18:20

Source: LASRE, 2024; STCP, 2024; HTA, 2024

[a]Electric bus connection to UCLA not included in length or number of stations.
[b]Average of northbound and southbound travel time.

Alt = Alternative
MM:SS = minutes:seconds

Table 4-2 presents the headways for each project alternative during peak and off-peak periods of the day in 2045. The peak period is defined as 6:00am to 9:00am and 3:00pm to 7:00pm on weekdays. All other times are considered off-peak. The No Project Alternative transit service through the Sepulveda Pass (Metro Line 761) would operate at 10-minute headways in the peak period/peak direction and 15-minute headways during all other times. The peak and off-peak frequencies for Alternatives 1, 3, 4, and 5 are as proposed by the pre-development agreement (PDA) contractors. The peak frequency for Alternative 6 is based on Metro Rail Design Criteria, and the off-peak frequency range for Alternative 6 is based on typical Metro heavy rail operations. Alternatives 4 and 5 would operate at the shortest headways during the peak and off-peak periods.

Table 4-2. Headways by Project Alternative (minutes)

	Alt 1[a]	Alt 3	Alt 4	Alt 5	Alt 6
Peak	2.77	2.77	2.5	2.5	4
Off-Peak[b]	5-10	5-10	4-6	4-6	8-20

Source: LASRE, 2024; STCP, 2024; HTA, 2024

[a]Electric buses would operate between UCLA Gateway Plaza and the Metro D Line with headways of 2 minutes during peak periods and 5 minutes during off-peak periods.

[b]Ranges for off-peak headways account for variation at different times of the day (e.g., late night versus mid-day). Each alternative's shortest off-peak headway was used to analyze its off-peak performance.

Alt = Alternative

Table 4-3 presents the forecast weekday boardings by station for each of the alternatives in 2045.The No Project Alternative transit service through the Sepulveda Pass would have 11,444 daily boardings, significantly lower than the other project alternatives. Alternatives 4 and 5, which would provide eight heavy rail transit (HRT) stations each, are forecast to have the highest number of total daily boardings. Alternatives 4 and 5 would have 15 percent more boardings than Alternative 6, while Alternative 3 would have 24 percent fewer and Alternative 1 would have 43 percent fewer boardings than Alternative 6.

Table 4-3. Daily Boardings by Project Alternative

Station	Alt 1[a]	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[b]	10,374	10,962	18,384	18,212	15,518
Santa Monica Boulevard	3,190	3,405	5,077	5,107	5,625
Wilshire Boulevard/Metro D Line	18,200	19,812	33,384	33,448	30,918
UCLA Gateway Plaza	—	17,459	18,411	18,416	16,320
Getty Center	1,366	1,301	—	—	—
Ventura Boulevard[c]	5,727	5,937	7,210	7,232	7,163
Metro G Line[d]	8,919	8,683	15,148	14,991	13,569
Sherman Way[e]	1,553	1,523	6,678	6,598	—
Van Nuys Metrolink	12,262	12,762	18,485	19,549	17,981
Total[f]	**61,590**	**81,842**	**122,775**	**123,551**	**107,092**

Source: HTA, 2024

[a]The electric bus would have total daily boardings of 3,164 passengers (1,439 at Wilshire Boulevard; 1,501 at LeConte Avenue, and 224 at UCLA Gateway Plaza). Of the 3,164 daily passengers, 2,246 passengers would also board the monorail transit (MRT), and 918 would board only the bus, so the total boardings on Alternative 1 would be less than the sum of the MRT and electric bus boardings.

[b]Alternatives 1-5 would have Metro E Line stations at Expo/Sepulveda. Alternative 6 would have its station at Expo/Bundy.

[c]Alternatives 1-5 would have Ventura Boulevard stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[d]Alternatives 1-5 would have Metro G Line stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[e]Alternatives 1-5 would have Sherman Way stations along Sepulveda Boulevard.

[f]Totals may not equal the sum of values in a column due to rounding.

— = alternative does not have an MRT or HRT station at this location.
Alt = Alternative

Table 4-4 presents the forecast daily peak-period (7 hours) boardings by station for each project alternative in 2045. The No Project Alternative would have a total of 5,748 daily peak-period boardings. Alternatives 4 and 5 are forecast to have the highest number of peak-period boardings. Alternatives 4 and 5 would have approximately 9 percent more peak-period boardings than Alternative 6. Alternative 3 is forecast to have the next highest number of peak-period boardings, followed by Alternative 1, and the No Project Alternative.

Table 4-4. Peak-Period Boardings by Project Alternative

Station	Alt 1[a]	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[b]	6,910	6,968	12,573	12,487	10,488
Santa Monica Boulevard	1,477	1,865	2,449	2,419	3,433
Wilshire Boulevard/Metro D Line	12,441	12,872	21,502	21,654	21,240
UCLA Gateway Plaza	—	10,821	10,947	10,956	10,453
Getty Center	755	710	—	—	—
Ventura Boulevard[c]	3,420	3,464	4,230	4,246	4,417
Metro G Line[d]	5,530	5,233	9,676	9,615	9,214
Sherman Way[e]	955	914	4,061	4,009	—
Van Nuys Metrolink	8,325	8,374	12,718	13,381	12,858
Total[f]	**39,811**	**51,220**	**78,154**	**78,764**	**72,101**

Source: HTA, 2024

[a]The electric bus would have daily peak boardings of 1,390 passengers (628 at Wilshire Boulevard; 657 at LeConte Avenue, and 106 at UCLA Gateway Plaza). Some passengers boarding the electric bus would also board the MRT, so the total boardings on Alternative 1 would be less than the sum of the MRT and electric bus boardings.

[b]Alternatives 1-5 would have Metro E Line stations at Expo/Sepulveda. Alternative 6 would have its station at Expo/Bundy.

[c]Alternatives 1-5 would have Ventura Boulevard stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[d]Alternatives 1-5 would have Metro G Line stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[e]Alternatives 1-5 would have Sherman Way stations along Sepulveda Boulevard.

[f]Totals may not equal the sum of values in a column due to rounding.

— = alternative does not have an MRT or HRT station at this location.
Alt = Alternative

Table 4-5 presents the forecast off-peak boardings by station for each project alternative in 2045. The No Project Alternative would have a total of 5,696 off-peak daily boardings. Alternatives 4 and 5 are forecast to have the highest number of off-peak boardings. Alternatives 4 and 5 would have approximately 28 percent more off-peak boardings than Alternative 6, which would have the longest off-peak headways. Alternative 3 is forecast to have the next highest number of off-peak boardings, followed by Alternative 1.

Table 4-5. Off-Peak Boardings by Project Alternative

Station	Alt 1[a]	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[b]	3,464	3,994	5,811	5,725	5,031
Santa Monica Boulevard	1,713	1,540	2,628	2,689	2,192
Wilshire Boulevard/Metro D Line	5,759	6,940	11,882	11,795	9,679
UCLA Gateway Plaza	—	6,639	7,464	7,460	5,867
Getty Center	612	591	—	—	—
Ventura Boulevard[c]	2,307	2,473	2,980	2,986	2,746
Metro G Line[d]	3,389	3,451	5,473	5,376	4,355
Sherman Way[e]	599	609	2,617	2,589	—
Van Nuys Metrolink	3,938	4,388	5,767	6,169	5,123
Total[f]	**21,779**	**30,622**	**44,621**	**44,787**	**34,991**

Source: HTA, 2024

[a]The electric bus would have off-peak daily boardings of 1,774 passengers (811 at Wilshire Boulevard; 845 at LeConte Avenue, and 119 at UCLA Gateway Plaza). Some passengers boarding the electric bus would also board the MRT, so the total boardings on Alternative 1 would be less than the sum of the MRT and electric bus boardings.

[b]Alternatives 1-5 would have Metro E Line stations at Expo/Sepulveda. Alternative 6 would have its station at Expo/Bundy.

[c]Alternatives 1-5 would have Ventura Boulevard stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[d]Alternatives 1-5 would have Metro G Line stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[e]Alternatives 1-5 would have Sherman Way stations along Sepulveda Boulevard.

[f]Totals may not equal the sum of values in a column due to rounding.

— = alternative does not have an MRT or HRT station at this location.
Alt = Alternative

Table 4-6 presents the peak directional hourly load for each project alternative in 2045. The peak directional hourly load is the maximum number of passengers who would be on the train at a single point during a single hour. All the project alternatives would achieve their peak hourly load traveling south from the Ventura Boulevard Station into the Sepulveda Pass. Alternative 6 would have the highest peak hourly load (carrying 5,490 passengers/hour through the Sepulveda Pass), with Alternatives 5 and 4 having peak loads approximately 3 and 5 percent lower, respectively. Alternative 3 would have the lowest peak hourly load.

Table 4-6. Peak Loads by Project Alternative

Alternative	Peak Load (maximum number of passengers)	Location
Alternative 1	3,430	Between Ventura Boulevard and Getty Center
Alternative 3	3,410	Between Ventura Boulevard and Getty Center
Alternative 4	5,190	Between Ventura Boulevard and UCLA
Alternative 5	5,340	Between Ventura Boulevard and UCLA
Alternative 6	5,490	Between Ventura Boulevard and UCLA

Source: HTA, 2024

Table 4-7 presents the capital and operation and maintenance (O&M) costs for each project alternative. Capital costs are the initial expenses incurred to build the infrastructure and procure the necessary equipment and right-of-way. O&M costs are the ongoing expenses required to keep the Project running, including staffing and labor, energy, and repairs. The No Project Alternative would have negligible capital and O&M costs related to Metro Line 761. Apart from the No Project Alternative, Alternative 1 would have the lowest capital cost ($15.4 billion), and Alternative 6 would have the highest capital cost ($24.4 billion). Costs are presented in 2023 dollars.

Table 4-7. Capital and Operation and Maintenance Costs by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Capital Cost (2023 $M)	15,377	20,807	20,042	24,201	24,418
Annual Operation and Maintenance Cost (2023 $M)	131	130	147	148	157

Source: Metro, 2024

$M = millions of dollars
Alt = Alternative

Preliminary benefit-cost comparison indicates that the Proposed Project and the project alternatives would result in considerable benefits. Further quantification of project costs and benefits will inform future decision-making, including the potential for reduced travel times and vehicle operating costs and improved air quality, traffic safety, health, and economic productivity.

4.3 Goals and Objectives

In addition to performance measures related to moving people within the Study Area, Metro has established other goals for the Project. These goals are based on policies that Metro has adopted as the planner and operator of Los Angeles County's transit system, such as the *2020 Long Range Transportation Plan* (Metro, 2020), *Equity Platform Framework* (Metro, 2018a), and *Vision 2028 Plan* (Metro, 2018b), among others.

From these goals, objectives that the Project is intended to achieve were developed. Evaluation criteria specify the way each objective is measured and correspond with tables in this section. The following subsections present the six project goals, the objectives derived from each, and the evaluation criteria used to measure performance, with the aim of informing the public and decision-makers about how well each alternative would advance Metro's goals and objectives.

4.3.1 Improve Mobility

The goal of improving mobility refers to providing transit services that increase ridership by reducing overall travel times, connecting important destinations, and providing high-quality connections across services. From this goal, five objectives were developed. The following sections present each objective and summarize how well the alternatives satisfy the objective using the evaluation criteria.

4.3.1.1 Increase Transit Frequency and Decrease Travel Time

The first objective related to the goal of improving mobility is to increase transit frequency and decrease travel time. Table 4-8 presents the average operating speeds and service frequencies by alternative in 2045. The peak and off-peak frequencies for Alternatives 1, 3, 4, and 5 are as proposed by the PDA contractors. The peak frequency for Alternative 6 is based on Metro Rail Design Criteria, and the off-peak frequency range for Alternative 6 is based on typical Metro heavy rail operations. Average operating speeds are end-to-end averages that account for deceleration, acceleration, and stopping at

stations. Alternative 6 would have the highest average operating speed at 42.7 miles per hour (mph), followed by Alternative 5 at 42.5 mph; Alternative 3 would have the lowest at 33.0 mph. Alternatives 4 and 5 would have the highest service frequencies, with trains arriving every 2.5 minutes during peak periods.

Table 4-8. Average Operating Speeds and Service Frequencies by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Average Operating Speed (mph)	36.3	33.0	41.5	42.5	42.7
Headways/Service Frequencies (minutes)	2.77 (peak) 5-10 (off-peak)	2.77 (peak) 5-10 (off-peak)	2.5 (peak) 4-8 (off-peak)	2.5 (peak) 4-8 (off-peak)	4 (peak) 8-20 (off-peak)

Source: HTA, 2024

Alt = Alternative
mph = miles per hour

Transportation user benefits measure the systemwide benefits to travelers due to the implementation of the Project. Travel time savings is a measure of user benefits, which is expressed in hours of equivalent travel time saved with implementation of the Project compared to the No Project Alternative. Table 4-9 presents the average weekday time savings for users in 2045. Alternatives 4 and 5 would have the highest time savings across weekday riders, with over 32,000 hours saved. On an individual trip basis, Alternatives 4, 5, and 6 would have the highest average travel time savings of over 15 minutes per trip.

Table 4-9. 2045 Average Weekday User Benefits by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
User Benefits (travel time savings in hours)	13,672	20,023	32,223	32,297	27,883
User Benefits per Project Trip (travel time savings in minutes)	13.1	14.7	15.7	15.7	15.6

Source: HTA, 2024

Alt = Alternative

Table 4-10 presents the travel times between select stations across project alternatives and driving times during the peak hour. Alternatives 4, 5, and 6 would generally offer the shortest travel times between station pairs, although all the alternatives would offer faster travel times than the peak average driving time.

Table 4-10. Travel Times Between Select Station Pairs by Project Alternative (minutes)

Station Pair	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6	Driving[a]
Metro D Line Westwood/UCLA Station – Metrolink Van Nuys Station	31	33	23	23	22	35-85
Metro D Line Westwood/UCLA Station – Metro G Line Reseda Station	37	39	31	32	37	30-70
Metro D Line Westwood/UCLA Station – Metrolink Sylmar/San Fernando Station	48	50	41	40	37	45-100
Metro D Line Century City/Constellation Station – Metrolink Van Nuys Station	34	36	26	26	25	35-85
Metro D Line Century City/Constellation Station – Metro G Line Reseda Station	40	42	34	35	40	35-80

Station Pair	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6	Driving[a]
Metro D Line Century City/Constellation Station – Metrolink Sylmar/San Fernando Station	51	53	44	43	40	50-110
Metro E Line Downtown Santa Monica Station – Metrolink Van Nuys Station	45	50	37	36	32	45-100
Metro E Line Downtown Santa Monica Station – Metro G Line Reseda Station	52	56	44	45	49	35-75
Metro E Line Downtown Santa Monica Station – Metrolink Sylmar/San Fernando Station	63	68	54	54	49	50-110

Source: HTA, 2024

[a]Driving times are for 2024 and were obtained from Google Maps. The range represents differences in peak versus off-peak travel.

Alt = Alternative

4.3.1.2 Increase Transit Ridership

The second objective related to the goal of improving mobility is to increase transit ridership.

Table 4-11 shows the daily boardings and number of new transit trips by project alternative in 2045. New transit trips are the number of systemwide linked transit trips that would otherwise have relied on other transportation modes (primarily driving) but take transit due to the implementation of the Project. Alternative 5 would have the highest number of daily boardings and new transit trips, while Alternative 1 would have the lowest number of daily boardings and new transit trips.

Table 4-11. Daily Boardings and New Transit Trips by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Daily Boardings	62,510	81,842	122,775	123,551	107,092
New Transit Trips	20,051	26,071	41,659	42,043	37,078

Source: HTA, 2024

Alt = Alternative

4.3.1.3 Prioritize Connections to High-traffic Points of Interest

The third objective related to the goal of improving mobility is to prioritize connections to high-traffic points of interest.

Table 4-12 presents the current total population and employment around station areas by project alternative. Alternative 6 would have the largest population within 0.5 mile of stations (82,471), while Alternative 3 would have the highest number of employees within 0.5 mile of stations (129,451).

Table 4-12. Population and Employment within 0.5 and 3 Miles of Stations by Project Alternative

	Alt 1	Alt 1 w/E-bus	Alt 3	Alt 4	Alt 5	Alt 6
Within 0.5 mile of stations						
Population	58,455	81,606	78,092	79,958	79,929	82,471
Employees	59,447	128,240	129,451	128,745	128,228	115,709
Within 3 miles of stations						
Population	874,899	886,114	883,098	862,781	863,363	871,246
Employees	582,984	602,690	601,957	598,955	598,984	611,618

Source: HTA, 2024

Alt = Alternative
E-bus = Electric Bus

4.3.1.4 Promote Efficiency of Transfer Experience to Fixed and Non-Fixed Guideway Systems

The fourth objective related to the goal of improving mobility is to promote efficiency of transfer experience to fixed and non-fixed guideway transportation systems. Table 4-13 presents the time to transfer to other transit routes from each project alternative in 2045. The out-of-vehicle travel time is calculated by adding the walk time between platforms and half of the headway of the other transit route to account for the average waiting time. During peak hours, Alternatives 4 and 5 would have the fastest transfer times to the Metro E and G Lines. Alternative 6 would have the fastest transfer time to the Metro D Line and to the East San Fernando Valley Light Rail Transit (ESFV LRT) Line. Alternatives 1 and 3 would have the fastest transfers to the Metrolink Ventura County Line.

Table 4-13. Transfer Times to Other Lines by Project Alternative (minutes)

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[a]	5.8	5.8	4.3	4.3	4.7
Metro D Line[b]	5.0	5.5	5.2	5.2	4.3
Metro G Line[c]	6.0	6.0	4.7	6.0	7.9
ESFV Light Rail Transit Line	5.1	5.1	5.8	5.8	4.4 (at G Line) 4.2 (at Van Nuys)
Metrolink Ventura County Line[d]	16.8	16.8	17.4	17.4	18.0

Source: HTA, 2024

[a]Alternatives 1-5 would have Metro E Line connection at Expo/Sepulveda. Alternative 6 would have its connection at Expo/Bundy.

[b]Alternatives 1 would have a Metro D Line connection at Westwood/VA. Alternatives 3-6 would have their Metro D Line connections at Westwood/UCLA.

[c]Alternatives 1 and 3 would have a Metro G Line connection at a new Metro G Line station near I-405. Alternatives 4 and 5 would have a Metro G Line connection at Sepulveda. Alternative 6 would have its connection at Van Nuys.

[d]Out-of-vehicle transfer times to Metrolink are significantly higher than other lines because of the longer headways (30 minutes) of commuter rail.

Alt = Alternative
ESFV = East San Fernando Valley

4.3.1.5 Support Non-automobile First-Last Mile Connections

The fifth objective related to the goal of improving mobility is to support connections between the transit system and a traveler's starting point (first mile) or destination (last mile) without relying on automobiles. Table 4-14 shows the percentage of trips in 2045 using bus, rail, and active transportation (non-motorized travel, such as walking and cycling) to access Project stations, known as mode share. Alternatives 4 and 5 would have the highest bus mode share, while Alternative 1 would have the highest rail mode share and Alternative 3 would have the highest active transportation mode share.

Table 4-14. Bus, Rail, and Active Transportation Mode Share by Alternative

Mode	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Bus Mode Share	23%	19%	28%	28%	23%
Rail Mode Share	54%	61%	55%	55%	61%
Active Transportation Mode Share	18%	16%	14%	14%	14%
Total Non-Auto Mode Share	**95%**	**96%**	**97%**	**97%**	**98%**

Source: HTA, 2024

Alt = Alternative

4.3.2 Improve Accessibility and Promote Equity

The goal of improving accessibility and promoting equity refers to improving access to jobs, housing, community resources, healthy communities, and mobility options for historically underserved Equity Focus Communities (EFC) and others who are most reliant on an effective and inclusive transit system. From this goal, two objectives were developed. The following sections present each objective and summarize how well the alternatives would satisfy the objective using the evaluation criteria.

4.3.2.1 Improve Access for Equity Focus Communities

The first objective related to the goal of improving accessibility and promoting equity is to improve access for EFCs. Table 4-15 presents existing EFC populations within 0.5 mile of stations by alternative. EFCs are defined by higher concentrations of low-income households, non-white households, and households with no vehicles. Within the Project Study Area, EFCs are concentrated in Van Nuys and near UCLA, as a result of student demographics. Alternatives 4 and 5 would have the highest EFC populations near stations.

Table 4-15. Equity Focus Community Populations within 0.5 Mile of Stations by Project Alternative

	Alt 1	Alt 1 w/E-bus	Alt 3	Alt 4	Alt 5	Alt 6
EFC Populations within 0.5 mile of stations	22,638	32,076	30,227	33,021	33,020	30,299

Source: HTA, 2024

Alt = Alternative
E-bus = Electric Bus
EFC = Equity Focus Community

4.3.2.2 Target Infrastructure and Service Investments Toward Those with the Greatest Mobility Needs

The second objective related to the goal of improving accessibility and promoting equity is to target infrastructure and service investments toward those with the greatest mobility needs. Table 4-16 presents the existing number of individuals under 18 or over 65 and the number of zero-car households within 0.5 mile and 3 miles of stations by project alternative. Similar to EFCs, these demographics are associated with greater mobility needs. Within 0.5 mile of stations, Alternatives 4 and 5 would have the largest populations with mobility needs. Within 3 miles of stations, Alternatives 1 and 3 would have larger populations compared to the remaining alternatives. Alternative 6 would have the highest number of zero-car households within 0.5 mile and 3 miles of stations.

Table 4-16. Population with Greatest Mobility Needs within 0.5 Mile and 3 Miles of Stations by Project Alternative

	Alt 1	Alt 1 w/E-bus	Alt 3	Alt 4	Alt 5	Alt 6
Within 0.5 mile of stations						
Number of individuals under 18	9,587	10,637	10,446	11,114	11,077	10,751
Number of individuals over 65	6,600	7,884	7,459	7,979	7,962	7,569
Number of zero-car households	2,078	3,233	3,100	3,179	3,176	3,928
Within 3 miles of stations						
Number of individuals under 18	158,471	160,422	159,872	156,051	156,139	151,516
Number of individuals over 65	115,567	118,052	117,390	113,412	113,511	115,543
Number of zero-car households	26,065	26,435	26,392	26,011	26,025	28,565

Source: HTA, 2024

Alt = Alternative
E-bus = Electric Bus

4.3.3 Support Community and Economic Development

The goal of supporting community and economic development refers to supporting positive economic growth in communities around stations, while minimizing physical barriers to nearby communities, and prioritizing station placement and design that is consistent with those communities' context. From this goal, three objectives were developed. The following sections present each objective and summarize how well the project alternatives would satisfy the objective using the evaluation criteria.

4.3.3.1 Increase Opportunity for Economic Growth Around Stations

The first objective related to the goal of supporting community and economic development is to increase opportunity for economic growth around stations. Commercial services in proximity to transit benefits ridership and increases economic growth. Impacts on existing commercial property should be minimized to support community and economic development. Table 4-17 summarizes the number of commercial properties that would be acquired under each project alternative. Alternative 6 would have the highest number of full commercial property acquisitions. These acquisitions would be needed for project construction, but residual parcels could be redeveloped after construction is complete.

Table 4-17. Commercial Property Acquisition by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Full Acquisition (number of parcels)	28 (Base MSF) 30 (Design Option 1)	27 (Base MSF) 29 (Design Option 1)	45	40	55
Partial Acquisition (number of parcels)	28	30	53	27	21
Estimated Building Area to be Acquired (square feet)	261,597	261,597	392,624	440,035	297,186
Estimated Land Area to be Acquired (square feet)	354,832	354,290	479,792	566,572	613,350

Source: HTA, 2024

Alt = Alternative

Commercial properties attract shoppers and employees, who are potential transit riders. Vice versa, transit stations increase foot traffic, potentially increasing sales for local businesses. Table 4-18 presents the distances from each alternative's station entrances to the nearest commercially zoned properties. Alternatives 4 through 6 stations would generally be located closest to commercial properties.

Table 4-18. Walking Distances (in feet) from Station Entrance to Nearest Commercially Zoned Property by Project Alternative

Station	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[a]	450	450	240	240	250
Santa Monica Boulevard	360	360	310	310	120
Wilshire Boulevard/Metro D Line	2,530	530	100	100	520
UCLA Gateway Plaza[b]	—	1,850	1,850	1,850	1,800
Getty Center[c]	NA[b]	NA[b]	—	—	—
Ventura Boulevard[d]	360	360	210	160	150
Metro G Line[e]	1,070	1,070	160	190	150
Sherman Way[f]	500	500	150	150	—
Van Nuys Metrolink	250	250	550	550	200

Source: HTA, 2024

[a]Alternatives 1-5 would have Metro E Line stations at Expo/Sepulveda. Alternative 6 would have its station at Expo/Bundy.

[b]Although there are commercial services near UCLA Gateway Plaza, they are not located in a commercial zone.

[c]Walking to the nearest commercial property is not possible from this station due to lack of nearby pedestrian facilities.

[d]Alternatives 1-5 would have Ventura Boulevard stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[e]Alternatives 1-5 would have Metro G Line stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[f]Alternatives 1-5 would have Sherman Way stations along Sepulveda Boulevard.

— = alternative does not have an MRT or HRT station at this location.
Alt = Alternative
NA = not applicable

4.3.3.2 Minimize Physical Barriers to Communities Created by the Project

The second objective related to the goal of supporting community and economic development is to minimize physical barriers to communities created by the Project. Although the Project aims to improve mobility within the Study Area, construction of new infrastructure could obstruct existing roads and other transportation facilities. In some cases, the closure of certain facilities would allow for improved access to transit in the form of transit plazas and bus stop facilities. A list of roads and pathways that would be permanently blocked or closed as a result of the project alternatives is as follows:

- **Alternative 1**
  - Closure of Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic; conversion to bus loop and transit plaza
  - Removal of I-405 southbound on-ramp from eastbound Sunset Boulevard
- **Alternative 3**
  - Closure of Dickens Street between Ventura Boulevard and Sepulveda Boulevard to vehicle traffic; conversion to bus loop and transit plaza
- **Alternative 4**
  - Vacation of approximately 325 feet of Del Gado Drive east of I-405
  - Replacement of Willis Avenue pedestrian bridge over the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor; mitigated by construction of new crossing
  - Construction of raised median along Sepulveda Boulevard in the San Fernando Valley (Valley) to accommodate aerial guideway columns, resulting in the removal of left turns along Sepulveda Boulevard to and from La Maida Street, Valleyheart Drive South, Hesby Street, Hartsook Street, Archwood Street, Hart Street, Leadwell Street, Covello Street, and several driveways
- **Alternative 5**
  - Closure of Cabrito Road and at-grade LOSSAN rail corridor near Extra Space Storage off of Raymer Street
  - Replacement of Willis Avenue pedestrian bridge over the LOSSAN rail corridor; mitigated by construction of new crossing
- **Alternative 6**
  - No permanent closures of roads or pathways

4.3.3.3 Prioritize Station Placement and Design that is Consistent with Community Context

The third objective related to the goal of supporting community and economic development is to prioritize station placement and design that is consistent with community context. Successful community integration involves minimizing residential displacement. Table 4-19 presents the number of residential displacements by project alternative. Estimated individuals displaced are based on the Project Study Area's average household size for owner-occupied and renter-occupied units. Alternatives 1 and 3 would have the lowest number of residential displacements (1 unit, approximately 3 individuals), while Alternative 4 would have the highest number of units and individuals displaced (202 units, approximately 531 individuals).

Table 4-19. Residential Displacements by Alternative

	Alt 1 with MSF Base Design	Alt 1 with MSF Design Option 1	Alt 3 with MSF Base Design	Alt 3 with MSF Design Option 1	Alt 4	Alt 5	Alt 6
Single-Family Units	1	1	1	1	10	0	0
Multi-Family Units	0	0	0	0	202	34	127
Estimated Individuals Displaced	3	3	3	3	531	85	343

Source: HTA, 2024

Alt = Alternative

Table 4-20 shows the walking distances from each station's fare gates to the nearest pedestrian pathway. This measure evaluates the integration of each station within the existing pedestrian network to facilitate walking connections to nearby destinations and other transit lines.

Table 4-20. Walking Distances (in feet) from Station Entrance to Nearest Pedestrian Pathway by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Metro E Line[a]	30	30	90	90	30
Santa Monica Boulevard	20	20	100	100	30
Wilshire Boulevard/Metro D Line	40	160	20	20	30
UCLA Gateway Plaza	—	130	0	0	0
Getty Center	NA[b]	NA[b]	—	—	—
Ventura Boulevard[c]	20	20	10	70	20
Metro G Line[d]	140	140	20	50	40
Sherman Way[e]	30	30	10	50	—
Van Nuys Metrolink	280	280	10	10	20

Source: HTA, 2024

[a]Alternatives 1-5 would have Metro E Line stations at Expo/Sepulveda. Alternative 6 would have its station at Expo/Bundy.

[b]Walking to the nearest pedestrian pathway is not possible from this station due to lack of nearby pedestrian facilities.

[c]Alternatives 1-5 would have Ventura Boulevard stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[d]Alternatives 1-5 would have Metro G Line stations along Sepulveda Boulevard. Alternative 6 would have its station along Van Nuys Boulevard.

[e]Alternatives 1-5 would have Sherman Way stations along Sepulveda Boulevard.

— = alternative does not have an MRT or HRT station at this location.
Alt = Alternative
NA = not applicable

4.3.4 Protect Environmental Resources and Support a Sustainable Transportation System

This goal refers to providing an overall reduction in vehicle miles traveled (VMT), greenhouse gas (GHG) emissions, air pollutant emissions, and impacts to environmental resources. From this goal, four objectives were developed. The following sections present each objective and summarize how well the project alternatives would satisfy the objective using the evaluation criteria.

4.3.4.1 Reduce Vehicle Miles Traveled

The first objective related to protecting environmental resources and supporting a sustainable transportation system is to reduce VMT. Table 4-21 presents the daily reduction in VMT as a result of Project operation by project alternative in 2045. Alternative 5 would have the highest daily VMT savings, while Alternative 1 would have the lowest.

Table 4-21. Vehicle Miles Traveled Savings by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Daily VMT Reduction in 2045	341,800	451,100	767,800	775,100	695,400

Source: HTA, 2024

Alt = Alternative
VMT = vehicle miles traveled

4.3.4.2 Reduce Greenhouse Gas Emissions

The second objective related to protecting environmental resources and supporting a sustainable transportation system is to reduce GHG emissions.

Table 4-22 presents the annual change in GHG emissions by project alternative compared to the No Project Alternative in 2045. The temporary increase in GHG emissions from construction are accounted for in this calculation by distributing them over the horizon year period. Alternative 4 would result in the largest decrease of annual GHG emissions (61,597 metric tons of carbon dioxide equivalents per year), while Alternative 1 would result in the smallest decrease (27,927 metric tons of carbon dioxide equivalents per year).

Table 4-22. Change in Annual Greenhouse Gas Pollutants by Project Alternative Compared to the No Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Change in Total GHG Pollutants ($MTCO_2e/yr$)	-27,927	-33,294	-61,597	-58,714	-58,354

Source: HTA, 2024

Alt = Alternative
GHG = greenhouse gas
$MTCO_2e/yr$ = metric tons of carbon dioxide equivalents per year

4.3.4.3 Reduce Air Pollutant Emissions

The third objective related to protecting environmental resources and supporting a sustainable transportation system is to reduce air pollutant emissions. Table 4-23 presents the change in peak daily air quality criteria pollutants by project alternative compared to the No Project Alternative in 2045. Unlike GHG emissions, the temporary increase in air quality criteria pollutants from construction are not included in this analysis. Alternatives 4 and 5 would result in the largest decrease of carbon monoxide (CO) and fine particulate matter ($PM_{2.5}$). All of the project alternatives would result in a decrease in daily air quality criteria pollutants except for volatile organic compounds (VOC), which are emitted from solvents, paints, adhesives, and other chemical products used for track and train car maintenance.

Table 4-23. Change in Air Quality Criteria Pollutants by Project Alternative Compared to the No Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Change in CO (lbs/day)	-319	-409	-772	-769	-628
Change in NO_x (lbs/day)	-33	-16	-101	-102	-105
Change in $PM_{2.5}$ (lbs/day)	-61	-80	-141	-142	-126
Change in VOC (lbs/day)	+8	+15	+7	+9	+12

Source: HTA, 2024

Alt = Alternative
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = fine particulate matter of diameter less than 2.5 microns
VOC = volatile organic compounds

Table 4-24 presents the peak daily criteria pollutant emissions from construction of each project alternative. Based on construction schedules, phases for construction of different components could overlap; therefore, the estimates of peak daily emissions included the potential overlaps by combining the relevant construction phase daily emissions. Peak daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of construction. Alternative 6 would have the lowest peak daily construction emissions for CO and VOCs. Alternative 1 would have the lowest emissions for nitrogen oxides (NO_x) and the same peak daily emissions of $PM_{2.5}$ as Alternative 6.

Table 4-24. Peak Daily Construction Criteria Pollutant Emissions by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Change in CO (lbs/day)	+776	+795	+900	+890	+505
Change in NO_x (lbs/day)	+202	+243	+359	+442	+226
Change in $PM_{2.5}$ (lbs/day)	+17	+19	+28	+33	+17
Change in VOC (lbs/day)	+32	+33	+38	+34	+29

Source: HTA, 2024

Alt = Alternative
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = fine particulate matter of diameter less than 2.5 microns
VOC = volatile organic compounds

4.3.4.4 Minimize Impacts to Environmental Resources

This objective relates to minimizing significant impacts to major environmental resources under CEQA. Section 4.4 presents a summary of environmental impacts, and Section 4.5 identifies the environmentally superior alternative.

4.3.5 Provide a Cost-Effective Solution and Minimize Risk

The goal of providing a cost-effective solution and minimizing risk refers to maximizing the benefits to the public relative to cost and also maximizing the potential eligibility for state and federal funding opportunities, which will reduce the reliance on local funding.

The Federal Transit Administration (FTA) has developed a set of evaluation criteria to assess and score proposed projects for funding eligibility under its Capital Investment Grants (CIG) program. Three evaluation criteria related to ridership are cost effectiveness, mobility improvements, and congestion relief. Cost effectiveness is based on the annualized cost per annual linked trip on the Project. ("Linked" refers to a complete journey where a passenger may only use the Project for a portion of their entire trip.) The mobility improvements rating is based on the annual linked trips on the Project, with a higher weight placed on linked trips made by transit-dependent populations. Finally, congestion relief is based on the number of new weekday systemwide linked transit trips.

Preliminary evaluations of the CIG ratings for cost effectiveness, mobility improvements, and congestion relief were calculated for each project alternative. Final ratings for all three criteria will depend on the performance of the alternatives in a "current year" scenario. An analysis conducted in conjunction with the ridership forecasting found that the Project would generate about 65 percent as many trips in the current year as in the horizon year, so this factor was used to estimate current year trips for all project alternatives. In addition, the final rating for the cost effectiveness criterion will depend on the share of project trips that would be made by transit-dependent riders. This data was not available for the project alternatives, so the estimate of 60 percent developed during the *Final Feasibility Report* (Metro, 2019) was used in the calculation of this rating.

In December 2024, FTA issued CIG Policy Guidance, which went into effect on January 16, 2025, with methodologies for calculating each criterion. Table 4-25 shows each project alternative's rating for Cost Effectiveness, Mobility Improvements, and Congestion Relief criteria.

Table 4-25. Preliminary FTA Capital Investment Grant Scores by Project Alternative

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Cost Effectiveness					
Annualized cost per annual linked project trip	$36.48	$32.60	$21.85	$24.30	$27.35
Rating	Low	Medium-Low	Medium-Low	Medium-Low	Medium-Low
Mobility Improvements					
Annual linked project trips with quintuple weight for trips by transit-dependent persons	59,632,779	78,074,962	117,123,892	117,864,174	102,162,752
Rating	High	High	High	High	High
Congestion Relief					
New systemwide linked transit trips	16,537	21,502	34,358	34,675	30,580
Rating	Medium-High	High	High	High	High

Source: HTA, 2024

Alt = Alternative

In terms of cost effectiveness, all of the project alternatives score medium-low except for Alternative 1. All project alternatives score high for mobility improvements. For congestion relief, Alternative 1 scores medium-high, while all of the other alternatives score high.

4.3.6 Enhance Resiliency

The goal of enhancing resiliency refers to providing resiliency to natural disasters and climate change, which can be destructive to a transit system and the riders who depend on it. From this goal, one

objective was developed. The following section summarizes how well the project alternatives would satisfy the objective using the evaluation criteria.

4.3.6.1 Provide Resilience to Natural Disasters and Climate Change

The only objective related to enhancing resiliency is to provide resilience to natural disasters and climate change. The evaluation criteria for this objective considers if project facilities would be located in areas vulnerable to floods, earthquakes, wildfires, and landslides. There are no Federal Emergency Management Agency flood zones within the Project Study Area. There is one quaternary fault (the Santa Monica Fault), one high severity fire hazard zone, and several landslide hazard areas that bisect the Project Study Area, meaning that all of the alternatives could potentially be vulnerable to these hazards. However, none of these hazards would pose a significant threat to any alternative.

4.4 Summary of Environmental Impacts

This section summarizes the potential environmental impacts that would result from the No Project Alternative and each of the project alternatives, including the maintenance and storage facility (MSF) Design Options. Potential impacts, their level of significance, and proposed mitigation measures are outlined for each of the alternatives. Near the end of this section, Table 4-26 presents a summary of impacts of each alternative for the environmental resources discussed in previous chapters. Table 4-27 presents a summary of impacts of the MSF options.

4.4.1 Aesthetics

Alternative 4 would result in significant and unavoidable operational impacts to aesthetics. The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to aesthetics, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.1.1 Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to scenic vistas.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts to scenic vistas.

4.4.1.2 Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to scenic resources. The No Project Alternative, however, would generally result in even fewer impacts, as it would avoid changes to the visual environment associated with new rail transit infrastructure.

Construction Impacts

Alternatives 1, 3, 4, 5, and 6 would result in significant construction impacts to scenic resources. Mitigation would be required to reduce the potentially significant impact from construction of

Alternatives 1, 3, 4, 5, and 6 to less than significant. The No Project Alternative 3 would avoid the construction impact that would occur under Alternative 6, as it would avoid changes to the visual environment associated with new rail transit infrastructure.

4.4.1.3 Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Operational Impacts

Alternative 6 would not result in any significant operational impacts to visual character or quality of public views in non-urbanized areas or conflict with zoning and scenic quality regulations. The No Project Alternative and Alternative 5 would not result in any additional impact beyond those caused by Alternative 6. The No Project Alternative would have even less potential for impact because it would not involve the construction and operation of new rail transit in the Project Study Area.

Alternatives 1 and 3 would result in additional operational impacts beyond those caused by Alternative 6. Operation of Alternatives 1 and 3 would result in a significant operational impact to visual character and quality requiring mitigation to reduce the impact to less than significant.

Alternative 4 would result in additional operational impacts beyond those caused by Alternative 6. Operation of Alternative 4 would result in a significant and unavoidable impact related to compliance with regulations governing scenic quality detailed in the Sepulveda Corridor Specific Plan due to the erection of an aerial guideway in the median of Sepulveda Boulevard in the San Fernando Valley.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in temporary potentially significant impacts to visual character and quality of public views due to the highly public nature of construction. These impacts would require mitigation, and with the implementation of the proposed measures, impacts would be reduced to less than significant. The No Project Alternative would avoid the construction impact to quality of public views that would be caused by Alternative 6. The No Project Alternative would have less potential for visual impacts, as no new rail transit infrastructure would be constructed under that alternative.

4.4.1.4 Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to substantial light or glare that would affect views. The No Project Alternative would even further avoid potential impacts as it would not involve the addition of new light sources or reflective surfaces that could create glare.

Construction Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to substantial light or glare that would affect views. The No Project Alternative would even further avoid potential impacts as it would not involve the addition of new light sources or reflective surfaces that could create glare.

4.4.2 Air Quality

The No Project Alternative would result in significant and unavoidable operational impacts to air quality. The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in significant and unavoidable construction impacts to air quality.

4.4.2.1 Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to conflicts with implementation of applicable air quality plans.

In contrast, the No Project Alternative would result in significant and unavoidable operational impacts. By not implementing the Project, the No Project Alternative would conflict with the Southern California Association of Governments (SCAG) *Connect SoCal, 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy* (2024-2050 RTP/SCS) (SCAG 2024) and the South Coast Air Quality Management District (SCAQMD) A*ir Quality Management Plan* (SCAQMD, 2022), both of which incorporate the Project to help achieve air quality objectives.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to conflicts with implementation of applicable air quality plans.

4.4.2.2 Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to cumulatively considerable net increase of criteria pollutants.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in significant and unavoidable impacts related to cumulatively considerable net increase of criteria pollutants. Construction of Alternatives 1, 3, 4, 5, and 6 would result in significant and unavoidable impacts due to a cumulatively considerable net increase of criteria pollutants. Specifically, NO_x emissions would exceed the SCAQMD thresholds for all alternatives, and feasible mitigation measures are not available to reduce these impacts to less than significant. Among the alternatives, Alternative 5 would result in the highest NO_x emissions during construction (442 pounds per day [lbs/day]), followed by Alternative 4 (359 lbs/day), Alternative 3 (243 lbs/day), Alternative 6 (226 lbs/day), and Alternative 1 (202 lbs/day). In contrast, the No Project Alternative would avoid all significant construction-related impacts, as construction activities needed to enhance Metro Bus Line 761 would be negligible and would not require ground disturbances.

Alternatives 1, 3, 4, and 5 would also result in additional construction impacts related to CO emissions, which vary considerably between the alternatives. Alternative 4 would result in the highest CO emissions during construction (900 lbs/day), followed by Alternative 5 (890 lbs/day), Alternative 3 (795 lbs/day), and Alternative 1 (776 lbs/day). Alternative 6, by comparison, would generate the lowest CO emissions (505 lbs/day), which would not exceed the SCAQMD thresholds for localized impacts. The

No Project Alternative would also avoid significant impacts related to CO, as enhancements to Metro Bus Line 761 would involve negligible construction activities and no ground disturbance. In contrast, even with mitigation, Alternatives 1, 3, 4, and 5 would result in localized CO emissions above SCAQMD thresholds, resulting in a significant and unavoidable impact.

4.4.2.3 Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to exposing sensitive receptors to substantial pollutant concentrations.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in significant and unavoidable impacts related to exposing sensitive receptors to substantial pollutant concentrations. Other than the No Project Alternative, all alternatives would exceed SCAQMD thresholds for localized levels of respirable particulate matter of 10 microns or less. There are no feasible mitigation measures to reduce these impacts to less than significant levels. In contrast, the No Project Alternative would avoid these impacts, as it would only involve negligible construction activities.

Relative to Alternative 6, Alternatives 4 and 5 would result in additional construction impacts. After mitigation, localized levels of fine particulate matter of 2.5 microns or less would still exceed SCAQMD thresholds, resulting in a significant and unavoidable impact. In contrast, with mitigation, Alternatives 1, 3, and 6 would not result in localized levels of 2.5 microns or less exceeding these thresholds.

4.4.2.4 Impact AQ-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to other emissions causing adverse effects.

Construction Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to other emissions causing adverse effects. The No Project Alternative would even further avoid significant construction impacts related to emissions causing adverse effects due to negligible construction activities under this alternative.

4.4.3 Biological Resources

The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in potentially significant operational impacts to biological resources, which would be reduced to less than significant with the implementation of mitigation measures. The Proposed Project and Alternatives 1, 3, 4, and 5 would also result in potentially significant construction impacts to biological resources, which would also be reduced to less than significant with the implementation of mitigation measures.

4.4.3.1 Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

Operational Impacts

Operation of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact on special-status bird and bat species from routine maintenance tree trimming. Mitigation would be required to reduce the potentially significant impact from operation of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the operational impact to special-status species that would occur under Alternative 6.

Construction Impacts

Construction of the Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact on special-status wildlife and plant species. Potentially significant impacts include habitat loss from vegetation removal activities, noise pollution from prolonged heavy equipment operation, and other prolonged human-induced disturbances associated with the construction of these alternatives. Mitigation would be required to reduce the potentially significant impact from construction of Alternatives 1, 3, 4, 5, and 6 to less than significant levels. The No Project Alternative would avoid the potentially significant construction impacts to special-status species that would occur under Alternative 6.

4.4.3.2 Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

Operational Impacts

Operation of the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in a potentially significant impact on a riparian habitat or other sensitive natural community.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact on sensitive vegetation communities. Mitigation would be required to reduce the potentially significant impact from construction of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the construction impact to riparian or sensitive natural communities that would occur under Alternative 6.

4.4.3.3 Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Operational Impacts

Because there are no state or federally protected wetlands within the Project Study Area, the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to protected wetlands.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact to protected wetlands. Mitigation would be required to reduce the potentially significant impact from construction of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the construction impact to protected wetlands caused by Alternative 6.

4.4.3.4 Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Operational Impacts

Operation of Alternatives 1, 3, 4, 5, and 6 would result in potentially significant impacts on the movement of migratory fish and wildlife, including mountain lions and the special-status migratory hoary bat. However, the impacts vary by alternative. Alternatives 1 and 3 would impact both mountain lions and hoary bats due to their proposed alignments and operational activities. Alternatives 4, 5, and 6 would primarily impact hoary bats but not mountain lions. Mitigation measures would be required for all project alternatives to reduce these potentially significant impacts to less than significant levels. In contrast, the No Project Alternative would avoid all operational impacts to migratory species, as it would not involve new infrastructure or maintenance activities that could disrupt wildlife movement.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact on migratory fish and wildlife. Mitigation would be required to reduce the potentially significant impact from construction of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the construction impact to wildlife migration that would occur under Alternative 6.

4.4.3.5 Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Operational Impacts

Operation of the Alternatives 1, 3, 4, 5 and 6 would lead to a potentially significant impact on trees protected by a preservation policy or ordinance. Mitigation would be required to reduce the potentially significant impact from operation of the Alternatives 1, 3, 4, 5 and 6. The No Project Alternative would avoid the operational impact to protected biological resources that would occur under Alternative 6.

Construction Impacts

Construction of the Alternatives 1, 3, 4, 5, and 6 would result in potentially significant impacts on trees protected by local preservation policies or ordinances due to the need for tree removal, though the extent of these potential impacts would vary. Alternative 1 would have the greatest potential impact among the alternatives, requiring the removal of 3,282 trees, Alternative 3 would require the removal of 2,926 trees, making it the second most potentially impactful alternative. Alternative 4 would involve the removal of 1,714 trees, while Alternative 5 would require the removal of 1,301 trees. Alternative 6 would have the least potential impact of the project alternatives, requiring the removal of 938 trees. The No Project Alternative would avoid all construction-related impacts to protected biological resources, as it would not involve any tree removal, making it the least potentially impactful alternative.

4.4.3.6 Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Operational Impacts

Because there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans within the Project Study Area, the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to conflicts with the provisions of habitat conservation plans.

Construction Impacts

Because there are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved habitat conservation plans within the Project Study Area, the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to conflicts with the provisions of habitat conservation plans.

4.4.4 Cultural Resources

No potentially significant impacts to cultural resources result from operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The Proposed Project and Alternatives 1, 3, and 4 would result in significant and unavoidable construction impacts to cultural resources.

4.4.4.1 Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to demolition, destruction, relocation, or alteration of historical resources.

Construction Impacts

Construction of Alternatives 1, 3, 4, and 6 would result in a significant and unavoidable impact related to demolition, destruction, relocation, or alteration of historical resources, though the magnitude of these impacts would vary among alternatives. Construction of Alternative 6 would result in significant impacts to the fewest number of historical resources (8), followed by Alternatives 1 and 5 (9), Alternative 3 (15) and Alternative 4 (24). No mitigation has been identified that would reduce these impacts under Alternatives 1, 3, 4, or 6 to less than significant. Implementation of mitigation as part of Alternative 5 would reduce impacts to less than significant. As construction activities associates with the No Project Alternative would be primarily on-street and would not affect historical resources, no construction impacts to historical resources would occur under the No Project Alternative. Therefore, the No Project Alternative and Alternative 5 would avoid the significant and unavoidable construction impact to historical resources that would be caused by Alternative 6.

4.4.4.2 Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to change in the significance of archaeological resources.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would potentially result in significant impacts related to change in the significance of archaeological resources, requiring mitigation. Implementation of mitigation would reduce impacts related to change in the significance of archaeological resources to less than significant. The No Project Alternative would avoid the construction impact to archaeological resources that would be caused by Alternative 6.

4.4.4.3 Impact CUL-3: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to disturbance of human remains.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would potentially result in significant impacts related to the disturbance of human remains due to proximity of Project construction to indigenous burial sites and to the Los Angeles National Cemetery, whose historic boundaries may have been larger than its current boundaries, requiring mitigation. Implementation of mitigation would reduce impacts related to disturbance of human remains to less than significant. The No Project Alternative would avoid the construction impact to archaeological resources that would be caused by Alternative 6.

4.4.5 Energy

No potentially significant impacts to energy would result from operation or construction of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5.

4.4.5.1 Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Operational Impacts

The No Project Alternative and Alternatives, 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to wasteful, inefficient, or unnecessary consumption of energy resources.

Construction Impacts

The No Project Alternative and Alternatives, 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to wasteful, inefficient, or unnecessary consumption of energy resources.

4.4.5.2 Impact ENG-2: Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to conflicts with state or local plans for renewable energy or energy efficiency.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to conflicts with state or local plans for renewable energy or energy efficiency.

4.4.6 Geology, Soils, Seismicity, and Paleontological Resources

No potentially significant impacts to geology, soils, seismicity, and paleontological resources would result from operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. Construction of Alternatives 3, 4, 5, and 6 would result in significant and unavoidable impacts. Alternative 1 would result in potentially significant construction impacts, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.6.1 Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to potential substantial adverse effects related to the rupture of a known earthquake fault. The No Project Alternative would be least likely to result in any impact related to rupture of a known earthquake fault as operation of the No Project Alternative would include negligible ground vibration near known earthquake faults.

Construction Impacts

Based on the proximity of construction activities to known earthquake faults as delineated on the Alquist-Priolo Earthquake Fault Zoning Map, construction of Alternatives 1, 3, 4, 5, and 6 would result in potentially significant impacts related to the risk of injury or death to construction workers in the event of an earthquake. Mitigation would be required to reduce these impacts to less than significant levels. In contrast, the No Project Alternative would not result in any construction impacts related to the rupture of a known earthquake fault, as it would not involve major construction activities near earthquake faults.

4.4.6.2 Impact GEO-2: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to seismic ground shaking or ground failure.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to seismic ground shaking or ground failure.

4.4.6.3 Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impact related to landslides. The No Project Alternative would be even less likely to result in significant operational impacts related to landslides as vibration caused by operation of the No Project Alternative would be negligible.

Construction Impacts

Construction of the tunnel portals for the Alternatives 3, 4, 5 and 6 would lead to a potentially significant impact from the potential risk of injury or death to construction workers from landslides. Mitigation would be required to reduce the potentially significant impact by shoring excavation walls or flattening or "laying back" excavation walls to a shallower gradient. Construction of the No Project and Alternative 1 would avoid the construction impact that would occur under Alternative 6.

4.4.6.4 Impact GEO-4: Would the project result in substantial soil erosion or the loss of topsoil?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impact related to soil erosion or loss of topsoil.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impact related to soil erosion or loss of topsoil.

4.4.6.5 Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impact related to soil stability.

Construction Impacts

Construction of the Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact to soil stability. Mitigation would be required to reduce the potentially significant impact during construction of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the construction impact that would occur under Alternative 6.

4.4.6.6 Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impact related to being located on expansive soil. The No Project Alternative would be least likely to result in impacts related to being located on expansive soil as it has the smallest footprint of all alternatives.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact from being located on expansive soil. Mitigation would be required to reduce the potentially significant impact of risk of loss, injury, or death involving expansive soil. The No Project Alternative would avoid the construction impact that would occur under Alternative 6.

4.4.6.7 Impact GEO-7: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Operational Impacts

As no septic systems or alternative wastewater disposal systems are proposed for the No Project Alternative or Alternatives 1, 3, 4, 5, or 6, none of the alternatives would result in any significant operational impact to wastewater disposal systems.

Construction Impacts

As no septic systems or alternative wastewater disposal systems are proposed for the No Project Alternative or Alternatives 1, 3, 4, 5, or 6, none of the alternatives would result in any significant construction impact to wastewater disposal systems.

4.4.6.8 Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impact to unique paleontological resources or geologic features.

Construction Impacts

Construction of Alternatives 3, 4, 5, and 6 would result in significant and unavoidable impacts related to a unique paleontological resource, site, or unique geologic feature due to use of automated tunnel boring machines for excavation. Alternatives 3, 4, 5, and 6 would include operation of tunnel boring machines (TBM) that would not allow for monitoring of paleontological resources during sediment removal, and therefore would result in a significant and unavoidable impact during construction. Mitigation would reduce the potentially significant impact during construction of column foundations under Alternatives 1 and 3. However, only Alternative 1, which does not involve TBM operation, could be mitigated to a less than significant impact. Therefore, Alternative 1 and the No Project Alternative would avoid the significant and unavoidable construction impact that would occur under Alternative 6.

4.4.7 Greenhouse Gas Emissions

The No Project Alternative would result in significant and unavoidable operational impacts to GHG emissions. The No Project Alternative would fail to result in the GHG emissions reduction benefits that would result from the Proposed Project (Alternative 6). No potentially significant impacts to GHG emissions would result from construction of the Proposed Project, No Project Alternative, or Alternatives 1, 3, 4, and 5.

4.4.7.1 Impact GHG-1: Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Operational Impacts

Operation of the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in GHG emissions that would have a significant impact on the environment.

Construction Impacts

Construction of the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in GHG emissions that would have a significant impact on the environment.

4.4.7.2 Impact GHG-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?

Operational Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to conflicts with plans, policies, or regulations adopted to reduce GHG emissions. Alternatives 3, 4, 5, and 6 are consistent with regional strategies, including those identified in SCAG's 2024-2050 RTP/SCS (SCAG, 2024), to meet per capita GHG emissions reduction targets. In contrast, the No Project Alternative would result in significant and unavoidable operational impacts because it would fail to contribute to GHG emission reductions, resulting in a conflict with SCAG's targets and other applicable plans designed to address GHG emissions.

Construction Impacts

Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to conflicts with plans or policies adopted for the purpose of reducing GHG emissions. Construction-related GHG emissions are accounted for in applicable plans and policies by being amortized over the Project's operational lifespan such that construction impacts remain consistent with the long-term regional GHG reduction targets.

The No Project Alternative would result in de minimis construction-related GHG emissions, as the improvements to Metro Bus Line 761 would involve minimal construction activities and no ground disturbance. However, the No Project Alternative would also fail to deliver the long-term GHG emissions reduction benefits associated with the operation of the Project and its alternatives.

4.4.8 Hazards and Hazardous Materials

The Proposed Project (Alternative 6) is the only alternative that would result in potentially significant operational impacts to hazards and hazardous materials but would be reduced to less than significant with the implementation of mitigation measures. Alternatives 1, 3, 4, 5, and 6 would result in potentially significant construction impacts to hazards and hazardous materials, which would be reduced to less than significant with the implementation of mitigation measures

4.4.8.1 Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to transport, use, or disposal of hazardous materials.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to transport, use, or disposal of hazardous materials.

4.4.8.2 Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials in the environment?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to release of hazardous materials in the environment.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact related to release of hazardous materials in the environment. Mitigation would be required to reduce the potentially significant hazard to the public and environment during construction of Alternatives 1, 3, 4, 5, and 6. The No Project Alternative would avoid the construction impact that would occur under Alternative 6.

4.4.8.3 Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to emission or handling of hazardous materials near a school.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to emission or handling of hazardous materials near a school.

4.4.8.4 Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Operational Impacts

Operation of Alternative 6 would result in a significant impact related to creation of significant hazards to the public or the environment because features of the Project are located within 100 feet of a hazardous material site. Mitigation would be required to reduce the potentially significant impact from

operation of Alternative 6. The No Project Alternative and Alternatives 1, 3, 4, and 5 would avoid any significant operational impacts that would occur under Alternative 6.

Construction Impacts

Construction of Alternative 6 would result in a significant impact related to creation of significant hazards to the public or the environment because features of the Project are located within 100 feet of a hazardous material site. Mitigation would be required to reduce the potentially significant impact from construction of Alternative 6. The No Project Alternative and Alternatives 1, 3, 4, and 5 would avoid any significant construction impacts that would occur under Alternative 6.

4.4.8.5 Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to safety hazard or excessive noise for people residing or working nearby.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to safety hazard or excessive noise for people residing or working nearby.

4.4.9 Hydrology and Water Quality

No potentially significant impacts to hydrology and water quality would result from operation or construction of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The project alternatives would comply with all applicable federal, state, regional, and local agency water quality protection laws and regulations, water quality control and/or sustainable groundwater management plans, as well as commonly used industry standards. They would also comply with the California Department of Transportation's (Caltrans) National Pollutant Discharge Elimination System (NPDES) Statewide Stormwater Permit, the City of Los Angeles Municipal Code, the City of Los Angeles and County of Los Angeles low-impact development (LID) Ordinance, and all other applicable regulations for all operational activities.

4.4.9.1 Impact HWQ-1: Would the project violate any water quality standards or Waste Discharge Requirements or otherwise substantially degrade surface or groundwater quality?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to substantial degradation of surface or groundwater quality.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to substantial degradation of surface or groundwater quality.

4.4.9.2 Impact HWQ-2 Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to groundwater supplies, recharge, or management.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts to groundwater supplies, recharge, or management.

4.4.9.3 Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv) impede or redirect flood flows?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to drainage patterns, runoff, or flood flows.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts to drainage patterns, runoff, or flood flows.

4.4.9.4 Impact HWQ-4 Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to release of pollutants due to project inundation.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to release of pollutants due to project inundation.

4.4.9.5 Impact HWQ-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to conflicts with water quality or water management plans.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to conflicts with water quality or water management plans.

4.4.10 Land Use and Planning

The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in significant and unavoidable operational impacts to land use and planning. Alternatives 1, 3, 4, 5, and 6 would result in potentially significant construction impacts to land use and planning, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.10.1 Impact LUP-1: Would the project physically divide an established community?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to division of established communities.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in potentially significant temporary impacts related to division of established communities by closing streets and sidewalks during construction, requiring mitigation. Implementation of proposed mitigation would reduce temporary construction impacts related to division of established communities to less than significant. The No Project Alternative would avoid the construction impact related to division of established communities caused by Alternative 6.

4.4.10.2 Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Operational Impacts

The MSF Base Design for Alternatives 1 and 3, and the MSFs for Alternatives 4, 5, and 6 would result in a significant and unavoidable operational impact related to compliance with land use plans or policies. These MSF sites would conflict with the LADWP Urban Water Management Plan, which has identified the site for the Mid-Valley Water Facility project. There are no feasible mitigation measures to reduce these impacts to less than significant levels. In contrast, MSF Design Option 1 for Alternatives 1 and 3, and the No Project Alternative would avoid this impact related to compliance with land use plans or policies.

Without mitigation, operation of Alternatives 4 and 5 would result in an additional impact beyond those caused by Alternative 6. Operation of Alternatives 4 and 5 would result in the removal of the Willis Avenue Pedestrian Overhead, which conflicts with the *City of Los Angeles Mobility Plan 2035* (DCP, 2016), requiring mitigation. Implementation of required mitigation would reduce operational impacts related to conflicts with land use plans and policies to less than significant.

Operation of Alternatives 1 and 3 would result in an additional significant and unavoidable impact beyond those caused by Alternative 6. Operation of Alternatives 1 and 3 would result in a conflict with land use plans and policies that prioritize the preservation of open space in the Santa Monica Mountains. Any use of land designated as open space would require approval by the City of Los Angeles and is therefore not under the control of Metro.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to compliance with land use plans or policies.

4.4.11 Noise and Vibration

The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in potentially significant operational impacts to noise and vibration, which would be reduced to less than significant with the implementation of mitigation measures. The Proposed Project and Alternatives 1, 3, 4, and 5 would result in significant and unavoidable construction impacts to noise and vibration.

4.4.11.1 Impact NOI-1: Would the project cause generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Operational Impacts

Operation of Alternatives 1, 3, 4, and 6 would result in potentially significant impacts due to increased ambient noise levels. However, the nature and severity of these impact would vary by alternative. Alternative 6 would result in moderate noise impacts at two Category 2 receptor locations (residences and buildings where people typically sleep). In comparison, Alternatives 1 and 3 would each result in moderate impacts at five such receptor locations, while Alternative 4 would result in moderate impacts at four locations and severe impacts at six locations. Mitigation would be required for each of these alternatives to reduce operational noise impacts to less than significant. In contrast, Alternative 5 and the No Project Alternative would avoid significant operational noise impacts.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in a significant impact because of substantial temporary increases in ambient noise levels in the vicinity of Project construction in excess of established standards. Mitigation measures would reduce impacts, but impacts would remain significant and unavoidable. Alternative 6 would have the least areas disrupted by significant temporary increases in ambient noise levels as the Alternative 6 alignment would be entirely underground. Under Alternative 6, construction activities would raise ambient noise levels above established standards only in close proximity to station areas. Alternatives 3, 4, and 5 would have more areas disrupted by significant temporary increases in ambient noise levels along aerial guideway portions of those alternatives' alignments. Compared to Alternatives 3, 4, 5, and 6, Alternative 1 would lead to the most areas disrupted by significant temporary increases in ambient noise levels as its guideway and related construction activities would take place entirely above ground.

As heavy construction equipment would not be required to construct the No Project Alternative, the No Project Alternative would have the lowest noise impacts related to construction and avoid the construction impact caused by Alternative 6.

4.4.11.2 Impact NOI-2: Would the project cause generation of excessive groundborne vibration or groundborne noise levels?

Operational Impacts

Operation of Alternatives 4, 5, and 6 would result in a potentially significant impact from excessive groundborne vibration or noise levels. Mitigation would be required to reduce the operational impact under NOI-2 to less than significant. The No Project Alternative and Alternatives 1 and 3 would avoid the potentially significant operational impact to groundborne noise levels caused by Alternative 6.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in a significant impact under NOI-2. Mitigation measures would reduce impacts, but impacts would remain significant and unavoidable due to vibration located at sensitive receptors. The No Project Alternative would avoid the significant and unavoidable construction impact to groundborne noise levels caused by Alternative 6.

4.4.11.3 Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the Project Study Area to excessive noise levels?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to exposure to excessive noise levels.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to exposure to excessive noise levels.

4.4.12 Population, Housing, and Growth

No potentially significant impacts to population, housing, and growth would result from operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. No potentially significant impacts to population, housing, and growth would result from construction of the Proposed Project, No Project Alternative, or Alternatives 1, 3, 4, and 5.

4.4.12.1 Impact POP-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to unplanned population growth.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to unplanned population growth.

4.4.12.2 Impact POP-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to displacement of substantial numbers of people or housing.

Although the impact would not be considered significant under CEQA, operation of Alternative 4 would require the acquisition of 192 multi-family residential units and 8 single-family residential units. Operation of Alternative 5 would require the acquisition of 34 multi-family residential units. Operation of Alternative 6 and Alternatives 1 and 3 would require acquisition of 3 or fewer residential units. Operation of the No Project Alternative would not require acquisition of any residential units. As discussed in Section 3.12, Metro would apply its acquisition and relocation policies to assure compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) (42 U.S. Code [U.S.C.] Chapter 61) and California Relocation Act (Government Code Section 7260 et seq.).

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to displacement of substantial numbers of people or housing.

4.4.13 Public Services

No potentially significant impacts to public services would result from the operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The Proposed Project and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to public services, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.13.1 Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection and emergency response facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection and emergency response?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to fire protection, emergency response facilities, service ratio, response times, or other emergency response performance objectives.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would include use of construction equipment, new workers, and temporary lane closures, however this temporary condition would not necessitate the construction of new or physically altered governmental facilities. A Transportation Management Plan (TMP) would be prepared and approved in coordination with LAFD prior to construction to facilitate and ensure safe and efficient traffic movement during construction. The No Project Alternative would have even less potential for impacts because it would not involve the construction of new rail infrastructure in the Project Study Area.

4.4.13.2 Impact PUB-2: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to police protection.

Construction Impacts

Construction of the No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant impacts requiring the construction or expansion of police facilities to maintain service ratios, response times, or other performance objectives.

4.4.13.3 Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities or other public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools or other public facilities?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to school or public facilities.

Construction Impacts

Construction of the Alternatives 1, 3, and 6 would limit pedestrian movements and access to UCLA Gateway Plaza. Access to schools via roadways due to lane closures near station sites would also be limited, however it is anticipated that access to all schools and public facilities in the Project study area would be maintained throughout construction. The No Project Alternative would avoid the construction impact to school facilities that would be caused by Alternative 6.

Construction activities at the TBM launch site under Alternatives 4 and 5 would require temporary closure or lane reductions to accommodate tunnel boring operations. In addition, other traffic disruptions including truck traffic, street closures and lane reductions would be required to support construction activities which could impede the vehicle circulation network as well as access to nearby schools. Mitigation would include various measures as part of a transportation management plan to minimize disruptions to local circulation and access to public facilities and reduce construction impacts to less than significant.

4.4.14 Recreation

No potentially significant impacts to recreation would result from the operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The Proposed Project and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to recreation, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.14.1 Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
Or
Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to increased use of recreational facilities resulting in permanent physical deterioration. The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would also not require new or expanded recreational facilities.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to increased use of recreational facilities resulting in permanent physical deterioration. The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would also not require new or expanded recreational facilities.

4.4.14.2 Impact REC-2: Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to construction or expansion of recreational facilities.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to construction or expansion of recreational facilities.

4.4.15 Transportation

The No Project Alternative would result in significant and unavoidable operational impacts to transportation. The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in potentially significant operational impacts to transportation, which would be reduced to less than significant with the implementation of mitigation measures. The Proposed Project and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to transportation, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.15.1 Impact TRA-1: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?

Operational Impacts

Alternatives 1, 3, and 6 would not result in any significant operational impacts related to conflicts with plans and policies.

Without mitigation, Alternatives 4 and 5 would result in additional operational impacts beyond those caused by Alternative 6. Operation of Alternatives 4 and 5 would have a potentially significant impact that would require mitigation because the removal of the Willis Avenue Pedestrian Overhead would conflict with the Los Angeles Mobility Plan 2035 Neighborhood Enhanced Network. With the proposed mitigation, this impact would be reduced to less than significant.

The No Project Alternative would result in additional operational impacts beyond those caused by Alternative 6. Operation of the No Project Alternative would cause a significant and unavoidable impact related to conflicts with regional transportation plans and policies because the No Project Alternative would not construct the Project, which is called for in *Measure M Expenditure Plan* (Metro, 2016) and SCAG's 2024-2050 RTP/SCS (SCAG, 2024).

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would temporarily impact operation and passenger experience of Amtrak, Metrolink, Metro rail and busway, and local bus services. Sidewalk and lane closures associated with Project construction for Alternatives 1, 3, 4, 5, and 6 would also disrupt access to transit service, a potentially significant impact requiring mitigation. Implementation of mitigation would reduce impacts from Project construction on transit operation and passenger experience to less than significant. The No Project Alternative would avoid the construction impact to transit operations and passenger experience that would be caused by Alternative 6.

Construction of Alternatives 1, 3, 4, 5, and 6 would temporarily impact the local roadway network, causing street and lane closures. Similar effects would be seen in the bicycle and pedestrian infrastructure network, with bicycle lane and sidewalk closures, detours, and roadway reconfigurations, leading to potentially significant impacts. Mitigation would be required to reduce potentially significant impacts on the roadway network to less than significant. The No Project Alternative would avoid the construction impact to the roadway network that would be caused by Alternative 6.

Construction of Alternatives 1, 3, and 6 would temporarily impact the freeway network, including freeway ramp closures. Alternatives 1 and 3 would also include I-405 lane closures. Impacts from these closures on the roadway network would be potentially significant and require mitigation. Mitigation would reduce impacts on the freeway network to less than significant. The No Project Alternative and Alternatives 4 and 5 would avoid the construction impact of freeway ramp closures that would result from construction of Alternative 6.

Construction-related truck movement under Alternatives 4 and 5 may affect pick-up and drop-off locations at the Ivy Bound Sherman Oaks Charter School, a potentially significant impact to the circulation system requiring mitigation. Mitigation would reduce construction impacts to pick-up and drop-off at the school to less than significant.

4.4.15.2 Impact TRA-2: Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to increases in VMT.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would lead to a potentially significant impact of temporary increases in VMT associated with construction work activities, construction labor trips, and the transport of excavated materials, construction equipment, and supplies. Mitigation would be required to reduce the potentially significant impact of increased VMT during construction of Alternative 6. The No Project Alternative would avoid the construction impact to VMT that would be caused by Alternative 6.

4.4.15.3 Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?

Operational Impacts

Operation of Alternatives 1, 3, 4, 5, and 6 would result in a potentially significant impact to safety. Under each Project alternative, operation would include an expected transfer path of passengers exiting the Project Van Nuys Metrolink Station and crossing Van Nuys Boulevard to reach the ESFV LRT Van Nuys Metrolink Station. High transfer volumes would lead to passengers not having sufficient safe queuing space when transferring to the ESFV LRT Line. In the peak hour, queues to enter the ESFV LRT station would be so long that they would extend into Van Nuys Boulevard, a potentially significant impact to safety requiring mitigation. With mitigation, operational impacts to safety would be reduced to less than significant. The No Project Alternative would avoid the operational impact to safety that would be caused by Alternative 6.

Operation of Alternative 6 would lead to a similar impact to safety at the Expo/Bundy station. High transfer volumes would lead to passengers not having sufficient safe queuing space when transferring to the Metro E Line. In the peak hour, queues to enter the Metro E Line Expo/Bundy station would be so long that they would extend onto the escalator of Alternative 6 Expo/Bundy station, a potentially significant impact to safety requiring mitigation. With mitigation, operational impacts to safety would be reduced to less than significant. The No Project Alternative and Alternatives 1, 3, 4, and 5 would avoid this operational impact to safety that would be caused by Alternative 6.

Without mitigation, Alternatives 1 and 3 would result in an operational impact different from those that would result from operation of Alternative 6. Operation of Alternatives 1 and 3 would include a new pick-up/drop-off area near the Metro E Line Expo/Sepulveda station. This area would be accessed via a new driveway off Pico Boulevard. The proximity of the driveway to the intersection of Pico Boulevard and Cotner Avenue would not allow for a westbound left-turn lane into the driveway, creating a risk of rear-end collisions. Operation of Alternatives 1 and 3 would also include a new pick-up/drop-off area near the Sherman Way station. The pick-up/drop-off area would use part of an existing travel lane, creating a risk of rear-end collisions. Mitigation would be required to reduce the potentially significant impacts to safety from operation of the drop-off areas under Alternatives 1 and 3 to less than significant.

Without mitigation, Alternatives 4 and 5 would result in an operational impact different from those that would result from operation of Alternative 6. Operation of Alternatives 4 and 5 includes the removal of the Willis Avenue Pedestrian Overhead, which may lead to pedestrians crossing at unsafe locations out of convenience as the next safe location would substantially increase some pedestrian journey times. Mitigation would be required to reduce potentially significant impacts to safety from operation of Alternatives 4 and 5 to less than significant.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts to safety.

4.4.15.4 Impact TRA-4: Would the project result in inadequate emergency access?

Operational Impacts

Alternative 6 would not result in any significant operational impacts related to emergency access. The No Project Alternative and Alternatives 1, 3, and 5 would not result in any additional impact to emergency access beyond those caused by Alternative 6.

Without mitigation, Alternative 4 would result in additional operational impacts beyond those caused by Alternative 6. Operation of Alternative 4 would permanently limit access for emergency vehicles due to intersection closures related to the erection of the aerial guideway along Sepulveda Boulevard, a potentially significant impact requiring mitigation. Implementation of mitigation would reduce impacts from operation of Alternative 4 on emergency access to less than significant.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would cause street and lane closures, which would lead to potentially significant temporary impacts to emergency vehicle access requiring mitigation. Mitigation would reduce construction impacts to emergency access to less than significant. The No Project Alternative would avoid the construction impact to emergency vehicle access that would be caused by Alternative 6.

Construction of the Alternatives 1, 3, and 6 would necessitate freeway ramp closures. Alternatives 1 and 3 would also include I-405 lane closures, causing potentially significant impacts to emergency access that would require mitigation. Mitigation would reduce construction impacts on emergency access to less than significant. The No Project Alternative and Alternatives 4 and 5 would avoid the construction impact due to freeway ramp closures that would be caused by Alternative 6.

Without mitigation, Alternatives 1 and 3 would result in additional construction impacts beyond those caused by Alternative 6. Construction activities under Alternatives 1 and 3 on Dowlen Drive near the VA Medical Center would result in inadequate access for ambulances, resulting in a potentially significant impact requiring mitigation. Implementation of mitigation would reduce impacts to a less than significant level.

4.4.16 Tribal Cultural Resources

Alternatives 1, 3, and 4 would result in potentially significant operational impacts to tribal cultural resources, which would be reduced to less than significant with the implementation of mitigation measures. The Proposed Project (Alternative 6) and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to tribal cultural resources, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.16.1 Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?

Operational Impacts

The No Project Alternative and Alternatives 5 and 6 would not result in any significant operational impacts related to adverse changes in the significance of a tribal cultural resource.

Alternatives 1, 3, and 4 would result in additional operational impacts related to adverse changes in the significance of a tribal cultural resource beyond those caused by Alternative 6. Operation of Alternatives 1, 3, and 4 would result in visual, audible, or atmospheric intrusions on the Sepulveda Pass and Los Angeles River, requiring mitigation. Implementation of mitigation would reduce operational impacts to tribal cultural resources to less than significant.

4.4.16.2 Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would potentially result in significant impacts to intact tribal cultural resource archaeological deposits, requiring mitigation. Implementation of mitigation would reduce construction impacts to tribal cultural resources to less than significant. The No Project Alternative would avoid the construction impacts to tribal cultural resources caused by Alternative 6.

4.4.17 Utilities and Service Systems

The MSF Base Design for Alternatives 1 and 3, and MSFs for Alternatives 4, 5, and 6 would result in a significant and unavoidable impact related to utilities and service systems. MSF Design Option 1 and the No Project Alternative would avoid this significant and unavoidable impact.

Besides MSF impacts, no potentially significant impacts to utilities and service systems would result from operation or construction of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The alternatives would not require a significant long-term, permanent source of water. This minimal water use would not interfere with the existing and planned capacity of water facilities. The minimal wastewater generation of the alternatives would not interfere with the existing and planned capacity of wastewater facilities. While the project alternatives would increase impervious surface areas, resulting in a potential increase in stormwater runoff, stormwater runoff would be minimized through compliance with the NPDES permit and incorporation of best management practices during construction. Stormwater drainage facilities that would be constructed for the project alternatives would comply with existing stormwater runoff regulations.

Electricity would be provided to the transit line by traction power substation (TPSS) units and to stations by traditional distribution connection facilities (e.g., power poles, underground wires, transmission lines, and distribution lines). The transit line is anticipated to be primarily powered by City of Los Angeles Department of Water and Power (LADWP) infrastructure and capacity. LADWP would reasonably accommodate the small percentage increase of electricity use required by the project alternatives. The project alternatives would involve the construction of power poles, transmission lines, and connections to the existing grid, but would not require the expansion or relocation of existing generation facilities. To offset electricity consumption levels across the Metro rail system, Metro has approximately 2.6 megawatts of renewable capacity as of 2020 and aims to expand capacity to 7.5 megawatts by 2030

(Metro, 2023). The project alternatives would result in a less than significant impact related to electric power facilities.

The electrically powered transit line would not use oil or natural gas. There would be no potential for the project alternatives to require new or expanded natural gas or oil facilities. The project alternatives also have no potential to interfere with telecommunication facilities.

4.4.17.1 Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Operational Impacts

The MSF Base Design for Alternatives 1 and 3, and MSFs for Alternatives 4, 5, and 6 would result in a significant and unavoidable operational impact related to new or expanded utilities facilities. These MSFs would conflict with LADWP's Mid-Valley Water Facility project which is proposed at the same location. There are no feasible mitigation measures to reduce these impacts to less than significant levels. In contrast, MSF Design Option 1 for Alternatives 1 and 3, and the No Project Alternative would avoid this impact related to new or expanded utilities facilities.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to new or expanded utilities facilities.

4.4.17.2 Impact US-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to the water supply.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to the water supply.

4.4.17.3 Impact US-3: Would the project result in a determination by the wastewater treatment provider who serves, or may serve, the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to wastewater treatment services.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts to wastewater treatment services.

4.4.17.4 Impact US-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to the attainment of solid waste reduction goals.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to the attainment of solid waste reduction goals.

4.4.17.5 Impact US-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to lack of compliance with federal, state, and local solid waste management regulations.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to lack of compliance with federal, state, and local solid waste management regulations.

4.4.18 Wildfire

No potentially significant impacts to wildfire would result from operation of the Proposed Project (Alternative 6), No Project Alternative, or Alternatives 1, 3, 4, and 5. The Proposed Project and Alternatives 1, 3, 4, and 5 would result in potentially significant construction impacts to wildfire, which would be reduced to less than significant with the implementation of mitigation measures.

4.4.18.1 Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evaluation plan?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts to emergency response plans.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6, including roadway, lane, and sidewalk closures, would result in a potentially significant temporary impact to emergency response plans, requiring mitigation. Implementation of mitigation would reduce construction impacts to emergency response plans to less than significant. The No Project Alternative would avoid the construction impact to emergency response plans that would be caused by Alternative 6.

4.4.18.2 Impact WFR-2: Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to exposure of project occupants to pollutant concentrations from wildfire.

Construction Impacts

Construction of Alternatives 1, 3, 4, and 6 would result in potentially significant temporary impacts related to exposure of project occupants to pollutant concentrations from wildfire, as potential sparks may ignite dry grass and fuel sources, requiring mitigation. Implementation of mitigation would reduce construction impacts related to exacerbated fire risks to less than significant. The No Project Alternative and Alternative 5 would avoid the construction impact related to exposure of project occupants to pollutant concentrations from wildfire that would be caused by Alternative 6.

4.4.18.3 Impact WFR-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to installation or maintenance of infrastructure that would exacerbate fire risks.

Construction Impacts

Construction of Alternatives 1, 3, 4, and 6 would result in potentially significant temporary impacts related to installation or maintenance of infrastructure that would exacerbate fire risks. Construction activities have the potential to ignite dry grass which could exacerbate a wildfire, requiring mitigation. Implementation of mitigation would reduce construction impacts related to exacerbated fire risks to less than significant. The No Project Alternative and Alternative 5 would avoid the construction impact related to installation or maintenance of infrastructure that would exacerbate fire risks that would be caused by Alternative 6.

4.4.18.4 Impact WFR-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Operational Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant operational impacts related to exposing people or structures to significant risks, including flooding or landslides.

Construction Impacts

The No Project Alternative and Alternatives 1, 3, 4, 5, and 6 would not result in any significant construction impacts related to exposing people or structures to significant risks, including flooding or landslides.

4.4.19 Cumulative Impacts

Operation of the Proposed Project (Alternative 6) and Alternatives 1, 3, and 4 would have a considerable contribution to at least one significant cumulative impact during operation. The Proposed Project and Alternatives 1, 3, 4, and 5 would each have a considerable contribution to at least one significant cumulative impact during construction.

4.4.19.1 Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?

Operational Impacts

Operation of Alternative 1 with MSF base design, Alternative 3 with MSF base design, and Alternatives 4, 5, and 6 would result in a significant and unavoidable impact related to considerable contributions to a significant cumulative impact to utilities and service systems.

Operation of Alternatives 1 and 3 would result in an additional significant and unavoidable impact related to considerable contributions to a significant cumulative impact to biological resources.

Operation of Alternative 4 would result in an additional significant and unavoidable impact related to considerable contribution to a significant cumulative impact to aesthetics.

The No Project Alternative would avoid the cumulative operational impacts caused by Alternative 6.

Construction Impacts

Construction of Alternatives 1, 3, 4, 5, and 6 would result in a significant impact related to considerable contributions to a significant cumulative impact to air quality, cultural resources, and noise and vibration.

Use of the TBM during construction of the Alternatives 3, 4, 5, and 6 would result in a significant impact related to a considerable incremental contribution to a cumulative impact related to paleontological resources.

Construction of Alternatives 1 and 3 would have an additional significant and unavoidable impact related to a considerable contribution to a significant impact to biological resources.

Construction of Alternatives 1 and 3 would have an additional significant and unavoidable impact related to a considerable contribution to a significant transportation impact for their expanded footprints in combination with cumulative projects.

The No Project Alternative would avoid each of the cumulative construction impacts that would occur under other alternatives.

Table 4-26. Summary of Impacts Before and After Mitigation for the Alternatives

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Aesthetics Operational Impacts							
Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	NI	LTS	LTS	SU	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	SU	LTS	LTS
Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Aesthetics Construction Impacts							
Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM AES-1	MM AES-1	MM AES-1	MM AES-1	MM AES-1
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Air Quality Operational Impacts							
Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Impacts Before Mitigation	SU	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	LTS	LTS	LTS
Impact AQ-2: Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under and applicable federal or state ambient air quality standard?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact AQ-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Air Quality Construction Impacts							
Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact AQ-2: Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under and applicable federal or state ambient air quality standard?	Impacts Before Mitigation	LTS	SU	SU	SU	SU	SU
	Applicable Mitigation	NA	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3
	Impacts After Mitigation	LTS	SU	SU	SU	SU	SU
Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Impacts Before Mitigation	LTS	SU	SU	SU	SU	SU
	Applicable Mitigation	NA	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3
	Impacts After Mitigation	LTS	SU	SU	SU	SU	SU
Impact AQ-4: Would the project result in other emissions (such as those leading to odors)	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
adversely affecting a substantial number of people?	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Biological Resources Operational Impacts							
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	NI	NI	NI	NI	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25
	Impacts After Mitigation	LTS	NI	NI	NI	NI	LTS
Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impacts Before Mitigation	LTS	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	NI	NI	NI	NI	NI

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-1, MM BIO-2, MM BIO-28	MM BIO-1, MM BIO-2, MM BIO-28	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impacts Before Mitigation	LTS	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	NI	NI	NI	NI	NI
Biological Resources Construction Impacts							
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-17 MM BIO-18, MM BIO-29
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
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Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impacts Before Mitigation	LTS	PS	PS	PS	NI	PS
	Applicable Mitigation	NA	MM BIO-15, MM BIO-18, MM BIO-21	MM BIO-15, MM BIO-18, MM BIO-21	MM BIO-15, MM BIO-18, MM BIO-21	NA	MM BIO-15, MM BIO-18, MM BIO-21
	Impacts After Mitigation	LTS	LTS	LTS	LTS	NI	LTS
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS

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resources, such as a tree preservation policy or ordinance?	Applicable Mitigation	NA	MM BIO-3, MM BIO-5 through MM BIO-9, MM BIO-14, MM BIO-23	MM BIO-5 through MM BIO-11, MM BIO-14, MM BIO-15, MM BIO-23	MM BIO-5 through MM BIO-10, MM BIO-12, MM BIO-15 through MM BIO-17, MM BIO-20, MM BIO-22, MM BIO-23, MM BIO-26	MM BIO-5 through MM BIO-10, MM BIO-12, MM BIO-15 through MM BIO-17, MM BIO-20, MM BIO-22, MM BIO-23, MM BIO-26	MM BIO-5 through MM BIO-10, MM BIO-13, MM BIO-14
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impacts Before Mitigation	LTS	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	NI	NI	NI	NI	NI
Cultural Resources Operational Impacts							
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	PS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	MM CUL-2	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

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	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Cultural Resources Construction Impacts							
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1 through MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5
	Impacts After Mitigation	LTS	SU	SU	SU	LTS	SU
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-,6 MM CUL-7
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Energy Operational Impacts							
Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact ENG-2: Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

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	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Energy Construction Impacts							
Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact ENG-2: Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Geology, Soils, Seismicity, and Paleontological Resources Operational Impacts							
Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-2: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

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effects, including the risk of loss, injury, or death involving landslides?	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-4: Would the project result in substantial soil erosion or the loss of topsoil?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-7: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

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Geology, Soils, Seismicity, and Paleontological Resources Construction Impacts							
Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-2: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	Impacts Before Mitigation	LTS	LTS	PS	PS	PS	PS
	Applicable Mitigation	NA	NA	MM GEO-2	MM GEO-2	MM GEO-2	MM GEO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-4: Would the project result in substantial soil erosion or the loss of topsoil?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide,	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5

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lateral spreading, subsidence, liquefaction, or collapse?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-7: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9
	Impacts After Mitigation	LTS	LTS	SU	SU	SU	SU
Greenhouse Gas Emissions Operational Impacts							
Impact GHG-1: Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impacts Before Mitigation	PS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	LTS	LTS	LTS

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Greenhouse Gas Emissions Construction Impacts							
Impact GHG-1: Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impacts Before Mitigation	PS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials Operational Impacts							
Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

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Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials Construction Impacts							
Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

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Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Hydrology and Water Quality Operational Impacts							
Impact HWQ-1: Would the project violate any water quality standards or Waste Discharge Requirements or otherwise substantially degrade surface or groundwater quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

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course of a stream or river, in a manner which would: i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Hydrology and Water Quality Construction Impacts							
Impact HWQ-1: Would the project violate any water quality standards or Waste Discharge Requirements or otherwise substantially degrade surface or groundwater quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-2: Would the project substantially decrease groundwater supplies or interfere	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

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substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would: i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows??	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HWQ-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Land Use and Planning Operational Impacts							
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	NI	PS	PS	PS	PS	LTS
	Applicable Mitigation	NA	MM LUP-1	MM LUP-1	MM TRA-7	MM TRA-7	NA
	Impacts After Mitigation	NI	SU	SU	LTS	LTS	LTS
Land Use and Planning Construction Impacts							
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Noise and Vibration Operational Impacts							
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM NOI-1.1	MM NOI-3.1	MM NOI-4.1	NA	MM NOI-6.1
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM VIB-4.1	MM VIB-5.1	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Noise and Vibration Construction Impacts							
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM NOI-1.2	MM NOI-3.2	MM NOI-4.2	NA	MM NOI-6.2
	Impacts After Mitigation	LTS	SU	SU	SU	LTS	SU
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM VIB-1.2	MM VIB-3.1	MM VIB-4.2	MM VIB-5.2	MM VIB-6.1
	Impacts After Mitigation	LTS	SU	SU	SU	SU	SU
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Population and Housing Operational Impacts							
Impact POP-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact POP-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Population and Housing Construction Impacts							
Impact POP-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact POP-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Public Services Operational Impacts							
Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection and emergency response facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection and emergency response?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact PUB-2: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Public Services Construction Impacts							
Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection and emergency response facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection and emergency response?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact PUB-2: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?	Impacts Before Mitigation	LTS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM TRA-4	MM TRA-4	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Recreation Operational Impacts							
Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? OR Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact REC-2: Does the project include recreational facilities or require the construction	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
or expansion of recreational facilities which have an adverse physical effect on the environment?	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Recreation Construction Impacts							
Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? OR Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?	Impacts Before Mitigation	NI	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Transportation Operational Impacts							
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM TRA-7	MM TRA-7	NA
	Impacts After Mitigation	SU	LTS	LTS	LTS	LTS	LTS
Impact TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-1 through MM TRA-3	MM TRA-1 through MM TRA-3	MM TRA-1 MM TRA-7	MM TRA-1 MM TRA-7	MM TRA-1 MM TRA-10
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	NI	LTS	LTS	PS	NI	NI
	Applicable Mitigation	NA	NA	NA	MM TRA-9	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	NI	NI
Transportation Construction Impacts							
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4, MM TRA-5	MM TRA-4, MM TRA-5	MM TRA-4, MM TRA-5, MM TRA-8	MM TRA-4, MM TRA-5, MM TRA-8	MM TRA-4, MM TRA-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	NI	PS	PS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
	Applicable Mitigation	NA	MM TRA-4, MM TRA-6	MM TRA-4, MM TRA-6	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Tribal Cultural Resources Operational Impacts							
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Tribal Cultural Resources Construction Impacts							
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL 8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL 8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL 8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL 8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL 8, MM TCR-1, MM TCR-2
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Utilities and Service Systems Operational Impacts							
Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact US-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact US-3: Would the project result in a determination by the wastewater treatment provider who serves, or may serve, the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact US-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact US-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Utilities and Service Systems Construction Impacts							
Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact US-2: Would the project have sufficient water supplies available to serve the project and	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
reasonably foreseeable future development during normal, dry, and multiple dry years?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact US-3: Would the project result in a determination by the wastewater treatment provider who serves, or may serve, the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact US-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact US-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Wildfire Operational Impacts							
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact WFR-2: Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact WFR-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks,	Impacts Before Mitigation	NI	LTS	LTS	LTS	NI	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Impacts After Mitigation	LTS	LTS	LTS	LTS	NI	LTS
Impact WFR-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Impacts Before Mitigation	NI	LTS	LTS	LTS	NI	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	NI	LTS
Wildfire Construction Impacts							
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact WFR-2: Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	NA	MM SAF-1, MM SAF-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact WFR-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Impacts Before Mitigation	NA	PS	PS	PS	NI	PS
	Applicable Mitigation	NA	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	NA	MM SAF-1, MM SAF-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	NI	LTS
Impact WFR-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides,	Impacts Before Mitigation	NI	LTS	LTS	LTS	NI	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
as a result of runoff, post-fire slope instability, or drainage changes?	Impacts After Mitigation	NI	LTS	LTS	LTS	NI	LTS
Cumulative Operational Impacts							
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	NI	PS	PS	PS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	SU	SU	SU	LTS	LTS
Cumulative Construction Impacts							
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	SU	SU	SU	SU	SU
Effects Determined Not to be Significant							
Agricultural and Forest Resources	Impacts Before Mitigation	NI	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI
Mineral Resources	Impacts Before Mitigation	NI	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI	NI

Source: HTA, 2024

Alt = Alternative
MM = Mitigation Measure
NA = Not Applicable

Table 4-27. Summary of Impacts Before and After Mitigation for the Maintenance and Storage Facilities

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Aesthetics Operational Impacts						
Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Aesthetics Construction Impacts						
Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Biological Resources Operational Impacts						
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Biological Resources Construction Impacts						
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-11	MM BIO-11	MM BIO-11	MM BIO-12	MM BIO-13

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
resources, such as a tree preservation policy or ordinance?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Cultural Resources Operational Impacts						
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Cultural Resources Construction Impacts						
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	NI	NI	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Energy Operational Impacts						
Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact ENG-2: Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Energy Construction Impacts						
Impact ENG-1: Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact ENG-2: Would the project conflict or obstruct a state or local plan for renewable energy or energy efficiency?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Geology, Soils, Seismicity, and Paleontological Resources Operational Impacts						
Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-2: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-4: Would the project result in substantial soil erosion or the loss of topsoil?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

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	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-7: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI

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Geology, Soils, Seismicity, and Paleontological Resources Construction Impacts						
Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-2: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking and/or seismic-related ground failure, including liquefaction?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-4: Would the project result in substantial soil erosion or the loss of topsoil?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that	Impacts Before Mitigation	PS	PS	PS	PS	PS

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would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Applicable Mitigation	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-7: Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impacts Before Mitigation	PS	PS	NI	PS	PS
	Applicable Mitigation	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	NA	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9
	Impacts After Mitigation	LTS	LTS	NI	LTS	LTS
Greenhouse Gas Emissions Operational Impacts						
	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

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Impact GHG-1: Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Greenhouse Gas Emissions Construction Impacts						
Impact GHG-1: Would the project result in greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GHG-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials Operational Impacts						
Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

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Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	LTS	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials Construction Impacts						
Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Hydrology and Water Quality Operational Impacts						
Impact HWQ-1: Would the project violate any water quality standards or Waste Discharge Requirements or otherwise substantially degrade surface or groundwater quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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Impact HWQ-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would: i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HWQ-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact HWQ-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Hydrology and Water Quality Construction Impacts						
Impact HWQ-1: Would the project violate any water quality standards or Waste Discharge Requirements or otherwise substantially degrade surface or groundwater quality?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HWQ-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would: i. result in substantial erosion or siltation on- or off-site; ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. impede or redirect flood flows?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HWQ-4: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact HWQ-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Land Use and Planning Operational Impacts						
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	SU	NI	NI	SU	SU
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	NI	NI	SU	SU
Land Use and Planning Construction Impacts						
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Noise and Vibration Operational Impacts						
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Noise and Vibration Construction Impacts						
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM NO-1.2, MM NOI-3.2	MM NO-1.2, MM NOI-3.2	MM NOI-1.2	MM NOI-4.2, MM NOI-5.1	MM NOI-6.2
	Impacts After Mitigation	SU	SU	SU	SU	SU
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	PS	LTS	PS	PS
	Applicable Mitigation	NA	MM VIB-1.1, MM VIB-3.1	NA	MM VIB-4.2, MM VIB-5.2	MM VIB-6.3
	Impacts After Mitigation	LTS	SU	LTS	SU	SU
Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Population and Housing Operational Impacts						
	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact POP-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact POP-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Population and Housing Construction Impacts						
Impact POP-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact POP-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Public Services Operational Impacts						
	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection and emergency response facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection and emergency response?	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact PUB-2: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Public Services Construction Impacts						
Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection and emergency response facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection and emergency response?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact PUB-2: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Recreation Operational Impacts						
Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? OR Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Recreation Construction Impacts						
Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? OR Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact REC-2: Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?	Impacts Before Mitigation	NI	NI	NI	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	LTS	LTS
Transportation Operational Impacts						
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Transportation Construction Impacts						
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA

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	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Tribal Cultural Resources Operational Impacts						
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Tribal Cultural Resources Construction Impacts						
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TCR-1, MM TCR-2	MM TCR-1	MM TCR-1	MM TCR-1	MM TCR-1
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Utilities and Service Systems Operational Impacts						
Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	SU	SU

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Impact US-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact US-3: Would the project result in a determination by the wastewater treatment provider who serves, or may serve, the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact US-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS
Impact US-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Utilities and Service Systems Construction Impacts						
Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

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Impact US-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact US-3: Would the project result in a determination by the wastewater treatment provider who serves, or may serve, the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact US-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impacts Before Mitigation	NI	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS
Impact US-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Wildfire Operational Impacts						
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact WFR-2: Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA

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occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact WFR-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact WFR-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Impacts Before Mitigation	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Wildfire Construction Impacts						
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact WFR-2: Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact WFR-3: Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks,	Impacts Before Mitigation	NI	NI	NI	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA

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emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Impacts After Mitigation	NI	NI	NI	NI	NI
Impact WFR-4: Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Impacts Before Mitigation	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Cumulative Operational Impacts						
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	SU	SU
Cumulative Construction Impacts						
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Effects Determined Not to be Significant						
Agricultural and Forest Resources	Impacts Before Mitigation	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	NI	NI	NI	NI
Mineral Resources	Impacts Before Mitigation	NI	NI	Ni	NI	NI
	Applicable Mitigation	NA	NA	NA	NA	NA

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
	Impacts After Mitigation	NI	NI	NI	NI	NI

Source: HTA, 2024

Note: Air Quality impacts are not included in this table because the Air Quality analysis of each alternative included impacts related to the MSF.
Alt = Alternative
MM = Mitigation Measure
NA = Not Applicable

4.4.20 Mitigation Measures

Table 4-28 provides a brief description of each mitigation measure.

Table 4-28. Mitigation Measures

Mitigation Measure	Description
Aesthetics	
MM AES-1	Temporary privacy screens during construction
Air Quality	
MM AQ-1	Zero-emission hauling trucks
MM AQ-2	Implementation of Metro's Green Construction Policy
MM AQ-3	Implementation of fugitive dust control measures
Biological Resources	
MM BIO-1	Avoid and Minimize Operations-Related Impacts to Nesting Birds
MM BIO-2	Avoid and Minimize Operations-Related Impacts to Special-Status Bat Species
MM BIO-3	Avoid and Minimize Operations-Related Impacts to Protected Trees and Shrubs
MM BIO-4	Avoid and Minimize Construction-Related Impacts to Nesting Birds
MM BIO-5	Avoid and Minimize Construction-Related Impacts to Special-Status Bat Species
MM BIO-6	Avoid and Minimize Construction-Related Impacts to Crotch's Bumble Bee
MM BIO-7	Avoid and Minimize Project-Related Impacts to Least Bell's Vireo
MM BIO-8	Avoid and Minimize Construction-Related Impacts to Special-Status Reptiles
MM BIO-9	Avoid and Minimize Construction-Related Impacts to Special-Status Plants
MM BIO-10	Avoid and Minimize Construction-Related Impacts to Sensitive Vegetation Communities
MM BIO-11	Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Alternatives 1 and 3)
MM BIO-12	Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Alternatives 4 and 5)
MM BIO-13	Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Alternative 6)
MM BIO-14	Avoid and Minimize Construction-Related Impacts to Mountain Lion and Vertebrate Movement Corridors
MM BIO-15	Avoid and Minimize Construction-Related Impacts to Jurisdictional Aquatic Resources
MM BIO-16	Installation of Environmentally Sensitive Area fencing or flagging
MM BIO-17	Monitoring of project activities within or near sensitive habitat or jurisdictional aquatic resources
MM BIO-18	Implementation of a Worker Environmental Awareness Plan (WEAP)
MM BIO-19	Wildfire prevention measures
MM BIO-20	Prohibition of construction workers bringing pets and firearms
MM BIO-21	Minimizing erosion, runoff, and sedimentation during rain events
MM BIO-22	Minimizing construction light pollution
MM BIO-23	Vehicle washing to prevent invasive species
MM BIO-24	Dust suppression measures
MM BIO-25	Limiting vehicle speeds on dirt or gavel access roads
MM BIO-26	Minimizing open trenches to prevent wildlife entrapment
MM BIO-27	Removal of spoils, trash, and any construction-generated debris
MM BIO-28	Avoid and Minimize Operations-Related Impacts to Mountain Lion and Vertebrate Movement Corridors
MM BIO-29	Avoid and Minimize Construction-Related Impacts to Overwintering Burrowing Owls

Mitigation Measure	Description
Cultural Resources	
MM CUL-1	Cultural resources monitoring and mitigation plan
MM CUL-2	Design treatments
MM CUL-3	Pre-construction and construction protection measures
MM CUL-4	Historical resource archival documentation
MM CUL-5	Interpretive program
MM CUL-6	Cultural resource training
MM CUL-7	Archaeological monitoring
MM CUL-8	Plan for unanticipated discovery of human remains
Geology	
MM GEO-1	Use of ground motion early warning systems
MM GEO-2	Use of shore excavation walls
MM GEO-3	Compliance with final geotechnical report
MM GEO-4	Prevent corrosion from soils
MM GEO-5	Preparation of a construction management plan
MM GEO-6	Paleontological monitoring during earth-moving activities
MM GEO-7	Preparation of a Paleontological Resources Impact Mitigation Program
MM GEO-8	Workers Environmental Awareness Program training
MM GEO-9	Paleontological monitoring for unrecognized paleontological resources
Hazards and Hazardous Materials	
MM HAZ-1	Phase II Environmental Site Assessment
MM HAZ-2	Soil and Groundwater Management Plan
MM HAZ-3	Contractor Specifications
MM HAZ-4	Worker Health and Safety Plan
MM HAZ-5	Hazardous Building Survey and Abatement
Land Use and Planning	
MM LUP-1	Coordination to amend open space and community plans
Noise and Vibration	
MM NOI-1.1	Alternative 1 Soundwalls
MM NOI-1.2	Alternative 1 Noise Control Plan
MM VIB-1.1	Alternative 1 Vibration Control Plan
MM NOI-3.1	Alternative 3 Soundwalls
MM NOI-3.2	Alternative 3 Noise Control Plan
MM VIB-3.1	Alternative 3 Vibration Control Plan
MM NOI-4.1	Alternative 4 Soundwalls
MM NOI-4.2	Alternative 4 Noise Control Plan
MM VIB-4.1	Alternative 4 Trackwork Isolation Methods
MM VIB-4.2	Alternative 4 Vibration Control Plan
MM NOI-5.1	Alternative 5 Noise Control Plan
MM VIB-5.1	Alternative 5 Trackwork Isolation Methods
MM VIB-5.2	Alternative 5 Vibration Control Plan
MM NOI-6.1	Alternative 6 TPSS Noise Reduction
MM NOI-6.2	Alternative 6 Noise Control Plan
MM VIB-6.1	Alternative 6 Vibration Control Plan
Wildfire	
MM SAF-1	Curtail above ground construction during high-risk wildfire periods
MM SAF-2	Clearing dry vegetation from construction and development sites

Mitigation Measure	Description
Tribal Cultural Resources	
MM TCR-1	Native American Monitoring
MM TCR-2	Unanticipated Discovery of Human Remains
Transportation	
MM TRA-1	Fare Gate Replacement at Van Nuys Metrolink ESFV LRT Station
MM TRA-2	Right-in/right-out Access Only at Expo/Sepulveda Driveway
MM TRA-3	Advance Warning Signage at Sherman Way Pick-up/drop-off Location
MM TRA-4	Transportation Management Plan
MM TRA-5	Temporary Bus Service to Replace Disrupted Metro Rail Service
MM TRA-6	UCLA and VA Medical Center Emergency Access Coordination
MM TRA-7	Replace Willis Avenue Pedestrian Overhead
MM TRA-8	Limit Truck Movements near Ivy Bound Sherman Oaks Charter School
MM TRA-9	First Responder and Emergency Services Coordination for Raised Median Design
MM TRA-10	Redesign West Entrance of Expo/Bundy Station

Source: HTA, 2024

4.5 Environmentally Superior Alternative

CEQA Guidelines section 15126.6(e)(2) requires that an EIR identify an "environmentally superior alternative" among the alternatives to the Proposed Project. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse environmental impacts. The range of project alternatives and their impacts are summarized and compared in Table 4-26, and the impacts of the MSF sites are summarized and compared in Table 4-27. The Metro Board may select an alternative other than the environmentally superior alternative as the LPA.

The No Project Alternative would generate the fewest adverse impacts, making it technically the environmentally superior alternative. CEQA Guidelines Section 15126.6(e)(2) requires that when the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify another alternative to the Proposed Project as the environmentally superior alternative. In addition, the No Project Alternative would fail to meet many regional and local planning objectives.

Unlike the No Project Alternative, all of the project alternatives would meet the basic project objectives. Table 4-29 summarizes the significant and unavoidable impacts that would result from each of the project alternatives, after implementation of mitigation measures. Because Alternative 1 with MSF Design Option 1 would result in the fewest (4) significant and unavoidable impacts, it is the environmentally superior alternative to the Proposed Project.

Table 4-29. Significant and Unavoidable Impacts (With Mitigation)

		Alt 1 + Base Design MSF	Alt 1 + MSF Design Option 1	Alt 3 + Base Design MSF	Alt 3 + MSF Design Option 1	Alt 4 + MSF	Alt 5 + MSF	Alt 6 + MSF
Aesthetics	Construction							
	Operation					X		
Air Quality	Construction	X	X	X	X	X	X	X
	Operation							
Cultural Resources	Construction	X	X	X	X	X		X
	Operation							
Geology, Soils, Seismicity, and Paleontological Resources	Construction			X	X	X	X	X
	Operation							
Land Use and Planning	Construction							
	Operation	X	X	X	X	X	X	X
Noise and Vibration	Construction	X	X	X	X	X	X	X
	Operation							
Utilities and Service Systems	Construction							
	Operation	X		X		X	X	X
Total		**5**	**4**	**6**	**5**	**7**	**5**	**6**

Source: HTA, 2024

4.6 Other Considerations

The purpose of this section is to help inform the public and Metro decision-makers of other considerations.

4.6.1 Schedule

Alternative 1 would be expected to start revenue operations in early 2036. Alternative 3 would be expected to start revenue operations in early 2038. Alternatives 4 and 5 would be expected to start revenue operations in mid 2038. Alternative 6 would be expected to start revenue operations in early 2039.

4.6.2 Economic and Fiscal Impacts

The CEQA Guidelines state that social and economic effects shall not be treated as significant effects on the environment (Section 15131 of the CEQA Guidelines). This assessment of economic effects compares the potential for each of the alternatives to cause potentially adverse or beneficial effects on local and regional economies.

Reasonably foreseeable conditions under the No Project Alternative would only include improvements to Metro Line 761. These improvements are not expected to stimulate additional growth. As a result, the No Project Alternative would have minimal effect on unplanned economic or fiscal development. Table 4-30 presents the employment and earnings that would be generated within the Los Angeles-Long

Beach-Anaheim Metropolitan Statistical Area from the capital expenditure of each alternative. Alternative 5 would generate the highest employment, earnings, and tax revenues from its capital construction investment.

Table 4-30. Construction Output, Earnings, and Employment

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Employment (Person-Year Jobs)	99,762	133,599	126,211	158,407	166,750
Total Earnings (2023 $M)	7,267	9,719	9,169	11,508	12,123
Income Tax Revenue (2023 $M)	676	903	853	1,070	1,127
Sales Tax Earnings (2023 $M)	182	243	229	288	303

Source: Metro, 2025

Alt = Alternative

4.6.3 Section 4(f)/Section 6(f)

The purpose of this section is to help inform Metro decision-makers of Section 4(f) and Section 6(f) considerations for each of the alternatives, as it is anticipated that federal funding and associated federal environmental reviews will be pursued at a later time. Section 4(f) of the Department of Transportation Act of 1966 governs "use" of a publicly owned park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance. Use of a Section 4(f) resource may not be approved unless FTA determines that (1) there is no prudent or feasible alternative, and (2) the project includes all possible planning to minimize harm to these resources resulting from such use (23 Code of Federal Regulations [CFR] 774.3). Section 6(f) refers to property acquired or developed with funding from the federal Land and Water Conservation Fund. No Section 6(f) property has been identified within the Project Study Area besides the Santa Monica Mountains National Recreation Area, for which the portions improved by funds from the Land and Water Conservation Fund would not be affected by any of the project alternatives. Therefore, there are no Section 6(f) considerations for the Project.

Under the No Project Alternative, the only reasonably foreseeable transit improvement along the Sepulveda Boulevard corridor would be revisions to the existing Metro Line 761. Changes to the bus route would have no potential to result in a use of any Section 4(f) resources as the revised bus route would continue to operate along existing street right-of-way, with no need to acquire property, either permanently or during construction, from a Section 4(f) resource.

It is anticipated that Alternative 1 would result in a permanent use of the Da Siani Ristorante property and a de minimis[1] impact on the West Los Angeles Veterans Affairs Historic District, Mission Canyon Open Space, Teichman Family Magnolia Park, and Rodeo Realty building.

It is anticipated that Alternative 3 would result in a permanent use of the Da Siani Ristorante property, a de minimis impact on the UCLA Historic District, UCLA Ackerman Hall, the West Los Angeles Veterans Affairs Historic District, the Westwood Federal Building, Mission Canyon Open Space, Teichman Family

[1] For historic sites, de minimis impact means that no historic property is affected by the project, or the project would have "no adverse effect" on the property in question. For parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Magnolia Park, and Rodeo Realty building, and no use of the UCLA Veterans Rehabilitation Services building, Chatam Restaurant, 10940 Weyburn Avenue, and 10811 Ambazac Way.

It is anticipated that Alternative 4 would result in a permanent use of Rodeo Realty, a de minimis impact on the Performing Arts Center, Valley Animal Hospital, 6833 Sepulveda Boulevard, 6160 Sepulveda Boulevard, Air Raid Siren No. 117, Cabana Motel, El Cortez Motel, 5724 Sepulveda Boulevard, Kauai Surf, 5450 Sepulveda Boulevard, Cathedral of St. Mary Church, Lt. Patrick H. Daniels United States Army Reserve Center, 4700 Sepulveda Boulevard, UCLA Historic District, and UCLA Ackerman Hall, and no use of Westwood Park.

It is anticipated that Alternative 5 would result in a de minimis impact on the Lt. Patrick H. Daniels United States Army Reserve Center, 4506 Saugus Avenue, the UCLA Historic District, and UCLA Ackerman Hall, and no use of Westwood Park.

It is anticipated that Alternative 6 would result in a permanent use of Bill's Valley Car Wash, a de minimis impact on the UCLA Historic District, UCLA Ackerman Hall, the Linde Medical Building, the Tishman Building, and Laemmle Theater, and no use of Westwood Park.

Mitigation measures have been identified in the *Sepulveda Transit Corridor Project Section 4(f) Impacts Technical Report* to minimize harm to these historic sites, parks, and recreational areas.