

Chapter 10 COMPARISON OF PROJECT AGAINST EXISTING CONDITIONS

The December 2010 court ruling in Northern California, *Sunnyvale West Neighborhood Assn, et al v. City of Sunnyvale City Council*, has underscored the California Environmental Quality Act (CEQA) requirement to analyze existing conditions when determining project impacts. Chapters 3 and 4 of this EIS/EIR use the year 2035 as a future baseline for measuring environmental impacts. This chapter analyzes environmental impacts using a year 2010 baseline. A modified baseline was prepared for this analysis, using only the portions of the rail system that were open in 2010. Analysis in this chapter reveals that transportation and cumulative impacts would be less in the year 2010 scenario than in 2035, and all other impacts would be similar or identical. The mitigation measures identified to address CEQA impacts in Chapters 3, 4, and 8 would be sufficient for the year 2010 impacts to achieve the same CEQA determinations as year 2035. No unique impacts would occur under the year 2010 scenario, and no additional mitigation measures would be required.

This chapter has been updated since publication of the Supplemental EA/Recirculated Draft EIR Sections to address comments received on the noise analysis in Section 4.7, as indicated in the Responses to Comments, Volume F-4. A portion of the noise analysis from Section 4.7 is included in this chapter, and has been updated for consistency. A vertical line in the margin is used to show where revisions have occurred to this section since publication of the Supplemental EA/Recirculated Draft EIR Sections, excluding minor edits for consistency and correction of formatting and minor typographical errors.

10.1 *Sunnyvale* Decision Applicability to the Regional Connector Transit Corridor Project

For a project such as the Regional Connector that will not commence operation for as much as ten plus years but will ultimately link to a regional system that will be fully operational in 2035, an environmental analysis that excludes rail lines currently under construction or reasonably foreseeable, and ignores that these projects will be in place when the Regional Connector reaches maturity cannot accurately inform the public of either the benefits or impacts of the project. This Final EIS/EIR, Chapters 3 and 4, describes the existing environment (Affected Environment) for 22 environmental factors. It then analyzes and discloses the impacts of the proposed Regional Connector project in the year 2035 when the project and related components of the regional rail system will be operating. This analysis captures cumulative and long-term impacts of the proposed project, in effect a ‘worst-case’ analysis of a realistic future scenario. For some impact topics, the future baseline is the same as existing conditions where appropriate, particularly in instances where conditions are not expected to change before 2035. Topics where use of the existing conditions baseline could conceivably result in worse impacts, such as air quality or traffic, are evaluated in Section 10.3 using additional modeling to support conclusions.

Metro believes that an analysis assuming the Regional Connector project in the present environment is purely hypothetical and does not enhance public understanding of project

impacts. Nevertheless, in the interest of full disclosure and completeness under CEQA, this chapter includes an analysis of the project under existing conditions.

10.2 Existing Conditions

Since some of the rail lines that would feed into the Regional Connector have not yet been completed, it is difficult to create an existing conditions scenario for *Sunnyvale* Decision analysis purposes that incorporates the Regional Connector as part of a cohesive transit system. For example, the Metro Expo Line, which is currently under construction, forms the western branch of the East-West Line in the 2035 scenario analyzed in prior chapters of this EIS/EIR. Without the Expo Line in place, the East-West Line would have its western terminus in downtown Los Angeles. The Expo Line will be completed before the Regional Connector's 2019 opening date, but the *Sunnyvale* Decision requires analysis of the existing Metro Rail system without the Expo Line in place. Several adjustments have been made to the headways and operating plans for the existing conditions scenario so that it could theoretically function within the existing rail system. This results in less-frequent trains than analyzed in the year 2035 scenario, because train frequencies are anticipated to increase in the future due to higher passenger volumes. The rail system analyzed for existing conditions consists of the following lines:

- Purple Line heavy rail subway from Union Station to Wilshire/Western Station, running every 10 minutes during peak hours and every 12 minutes during off-peak hours.
- Red Line heavy rail subway from Union Station to North Hollywood Station, running every 10 minutes during peak hours and every 12 minutes during off-peak hours.
- Green Line light rail from Norwalk Station to Redondo Beach Station, running every 7.5 minutes during peak hours and every 15 minutes during off-peak hours.
- North-South Line light rail (formed by the Regional Connector, the existing Metro Blue Line, and the existing Pasadena branch of the Metro Gold Line) from Sierra Madre Villa Station to Long Beach Station, running every 5 minutes during peak hours and every 12 minutes during off peak hours (some short trips are planned, so service on the outer parts of the line would be less frequent).
- East-West Line light rail (formed by the Regional Connector and the existing East Los Angeles branch of the Metro Gold Line) from 7th Street/Metro Center Station to Atlantic Station, running every 7.5 minutes during peak hours and every 12 minutes during off peak hours.

The North-South and East-West Lines would both use the Regional Connector. For the purposes of this analysis, it is assumed that the Locally Preferred Alternative (LPA) would be constructed as described in Chapter 2. A system map showing the assumed existing system with the Regional Connector is provided in Figure 10-1.

10.3 Environmental Analysis and Mitigation Measures

This section contains analysis of the existing rail system with the Regional Connector assumed to be in place, as described in Section 10.2. Each of the CEQA environmental topics discussed in Chapters 3 and 4 are addressed in the following subsections. Since the *Sunnyvale* Decision applies only to CEQA, NEPA analysis is not included. This analysis is focused on the LPA described in Chapter 2 of this Final EIS/EIR.

10.3.1 Transportation

10.3.1.1 CEQA Regulatory Framework

The CEQA regulatory framework for transportation impacts is described in Section 3.1.

10.3.1.2 Affected Environment

The affected environment for transit, parking, and other transportation modes such as bicycles and pedestrians would be similar to the scenario described in Section 3.2 which is based on existing conditions. However, fewer rail transit lines would be in operation, as discussed in Section 10.2.

10.3.1.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Construction-related transportation impacts would be similar to those described in Section 3.3.5. Significant impacts would include transit delays and detours, temporary lane closures and traffic circulation delays, temporary removal of on-street parking spaces, temporary sidewalk closures, and temporary pedestrian and bicycle detours.

10.3.1.4 Operational Impacts

The bus transit network, parking supply, and pedestrian and bicycle infrastructure in 2035 are not anticipated to differ greatly from existing conditions. As such, operational impacts for transit, parking, and other transportation modes such as bicycles and pedestrians would be similar to those described in Section 3.3.5.

For operational traffic impacts, the modeling results indicate that all 15 intersections studied would continue to operate at LOS D or better in the AM peak hour, and 14 of the 15 locations would continue to operate at LOS D or better in the PM peak hour. However, during the PM peak hour, one intersection would be operating at LOS F: Flower Street and 4th Street. This constitutes a lesser impact than the 2035 scenario analyzed in Chapter 3, where three intersections would be significantly impacted before mitigation and one after mitigation. During the AM peak hour, six intersections would experience improvements in delay, and six intersections would experience improvements in delay during the PM peak hour. Overall, the LPA would increase the person-carrying capacity through the downtown transportation environment.

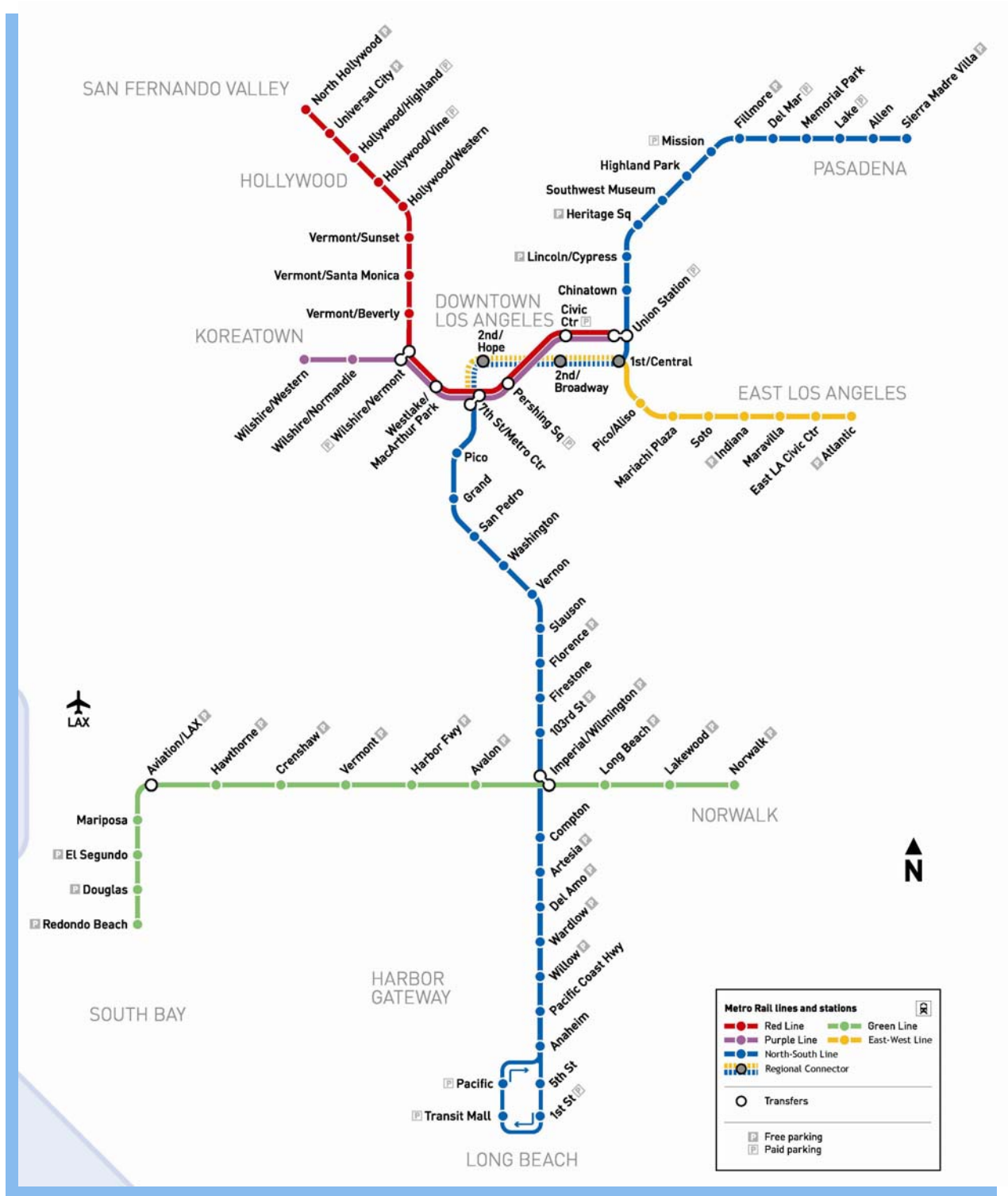


Figure 10-1. Existing Conditions Scenario Metro Rail System Map

Table 10-1 highlights the intersections that would exceed the significance threshold and are expected to be significantly impacted with implementation of the LPA under existing conditions. Intersections that would be significantly impacted are those that would experience a significant negative change in LOS (measured in seconds of delay) compared to existing conditions (see Table 3-2 for thresholds of significance). As noted above, only one intersection (Flower Street and 4th Street), during both the AM and PM peak hours, would experience a significant impact from the LPA under existing conditions. Intersection numbers in the “No.” column of Table 10-1 correspond to the numbers used to identify the intersections in Chapter 3.

**Table 10-1. Locally Preferred Alternative
Operational Traffic Circulation Impacts under Existing Conditions**

No.	Intersection	Existing		Existing with LPA		Change in Delay	Significant Impact
		LOS	Delay	LOS	Delay		
AM PEAK HOUR							
9	Alameda Street / 1 st Street	B	17.1	B	11.8	-3.7	No
10	Figueroa Street / 2 nd Street	B	19.8	C	20.1	0.3	No
20	Figueroa Street / 3 rd Street	C	27.9	C	28.6	0.7	No
32	Flower Street / 4 th Street	C	20.3	C	28.4	8.1	Yes
35	Flower Street / 5 th Street	B	13.9	B	15.0	1.1	No
38	Figueroa Street / 6 th Street	C	30.8	C	30.4	-0.4	No
39	Flower Street / 6 th Street	B	14.8	B	16.8	2.0	No
43	Figueroa Street / Wilshire Blvd.	C	21.3	C	21.1	-0.2	No
53	Grand Avenue / Temple Street	C	29.8	D	31.8	2.0	No
54	Hill Street / Temple Street	B	17.6	B	17.9	0.3	No
60	Alameda Street / Temple Street	C	22.8	B	14.2	-8.6	No
68	Hope Street / 1 st Street	D	35.8	C	32.0	-3.8	No
69	S. Hope Street / 2 nd Street	A	7.0	A	9.1	2.1	No
70	S. Hope Street / Gen. Thaddeus Kosciuszko Way	B	15.1	A	6.8	-8.3	No
85	Alameda Street / 4 th Street	A	8.3	A	8.3	0.0	No

Table 10-1. Locally Preferred Alternative
Operational Traffic Circulation Impacts under Existing Conditions (continued)

No.	Intersection	Existing		Existing with LPA		Change in Delay	Significant Impact
		LOS	Delay	LOS	Delay		
PM PEAK HOUR							
9	Alameda Street / 1 st Street	C	28.8	B	19.6	-9.2	No
10	Figueroa Street / 2 nd Street	C	30.4	C	30.7	0.3	No
20	Figueroa Street / 3 rd Street	D	45.0	D	45.7	0.7	No
32	Flower Street / 4 th Street	D	44.6	D	53.7	9.1	Yes
35	Flower Street / 5 th Street	B	16.6	B	18.5	1.9	No
38	Figueroa Street / 6 th Street	D	43.6	D	40.0	-3.6	No
39	Flower Street / 6 th Street	B	19.0	C	22.3	3.3	No
43	Figueroa Street / Wilshire Blvd.	F	117.1	F	118.6	1.5	No
53	Grand Avenue / Temple Street	D	38.4	D	41.0	2.6	No
54	Hill Street / Temple Street	C	33.1	C	33.0	-0.1	No
60	Alameda Street / Temple Street	C	34.4	C	31.0	-3.4	No
68	Hope Street / 1 st Street	C	25.6	C	28.3	2.7	No
69	S. Hope Street / 2 nd Street	B	12.2	B	19.5	7.3	No
70	S. Hope Street / Gen. Thaddeus Kosciuszko Way	B	17.7	B	11.7	-6.0	No
85	Alameda Street / 4 th Street	C	32.2	C	29.0	-3.2	No

10.3.1.5 Mitigation Measures

Since only one of the three intersections significantly impacted in the year 2035 would be significantly impacted under existing conditions (Flower Street and 4th Street), only one of the three mitigation measures identified in Section 3.4.2 would be required:

- At the intersection of 4th and Flower Streets, Metro, in coordination with the Los Angeles Department of Transportation (LADOT), shall permanently restripe the southbound Flower Street approach to provide one shared left-turn/through lane and two through lanes. Metro, in coordination with LADOT, shall also optimize the signal splits. (Mitigation measure TR-6 in the MMRP for the LPA, Chapter 8, of this Final EIS/EIR)

Unlike the 2035 scenario, where residual significant impacts would remain after mitigation, this mitigation measure would reduce all significant operational traffic impacts of the LPA under existing conditions below the level of significance, as shown in Table 10-2.

Table 10-2. Locally Preferred Alternative Operational Traffic Circulation Impacts After Mitigation under Existing Conditions

No.	Intersection	Existing		Existing with LPA		Change in Delay	Residual Significant Impact
		LOS	Delay	LOS	Delay		
AM PEAK HOUR							
32	Flower Street / 4 th Street	C	20.3	C	23.2	2.9	No
PM PEAK HOUR							
32	Flower Street / 4 th Street	D	44.6	D	44.5	-0.1	No

No new mitigation measures beyond those described in Section 3.4.2 and the Mitigation Monitoring and Reporting Program (MMRP) for the LPA (Chapter 8) would be required under existing conditions.

10.3.1.6 Conclusion

The transportation impacts of the LPA under existing conditions would be equivalent or less than those described for the 2035 scenario in Chapter 3. For operational traffic circulation, significant impacts remaining after mitigation in the 2035 scenario would not be significant after mitigation under existing conditions. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.1.7 CEQA Determination

Under existing conditions, the LPA would have potentially significant transportation impacts. Potentially significant construction-related impacts to traffic, transit, bicycle, and pedestrian circulation would remain after mitigation. No potentially significant operational traffic circulation impacts would remain after implementation of proposed mitigation measures.

10.3.2 Land Use and Development

10.3.2.1 CEQA Regulatory Framework

The CEQA regulatory framework for land use and development impacts is described in Section 4.1.2.

10.3.2.2 Affected Environment

The affected environment for land use and development would be the same as the scenario described in Section 4.1.3. The scenario in Section 4.1.3 is based on observations of existing

conditions. Land use types and zoning designations are not anticipated to change substantially between existing conditions and the year 2035.

10.3.2.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Similar to the year 2035 scenario described in Section 4.1.4.5, no significant land use or development-related construction impacts are anticipated under the existing conditions analysis.

10.3.2.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The smaller rail system and reduced train frequencies of the existing conditions analysis would not affect existing land uses. Similar to the year 2035 scenario described in Section 4.1.4.5, no significant land use or development-related operational impacts are anticipated under the existing conditions analysis.

10.3.2.5 Mitigation Measures

As with the year 2035 scenario, no mitigation measures for land use and development would be required under the existing conditions analysis.

10.3.2.6 Conclusion

The land use and development impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.1.4.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.2.7 CEQA Determination

Under existing conditions, the LPA would not have significant direct, indirect, or cumulative impacts on land use.

10.3.3 Displacement and Relocation

10.3.3.1 CEQA Regulatory Framework

The CEQA regulatory framework for displacement and relocation impacts is described in Section 4.2.1.

10.3.3.2 Affected Environment

The affected environment for displacements and relocation would be the same as the scenario described in Section 4.2.2. The scenario in Section 4.2.2 is based on observations of existing conditions. Most acquisitions would be made prior to the start of construction, following issuance of the Record of Decision (ROD) in late 2011; therefore, the analysis in Section 4.2 is already near existing conditions.

10.3.3.3 Construction Impacts

The same temporary easements identified in Section 4.2.3.5 for the 2035 scenario would also be required for the existing conditions analysis. Similar to the year 2035 scenario analyzed in

Section 4.2.3.5, significant displacement and relocation impacts would occur, but could be reduced or avoided through mitigation for the LPA under existing conditions.

10.3.3.4 Operational Impacts

The same permanent easements and takings identified in Section 4.2.3.5 for the 2035 scenario would also be required for the existing conditions analysis. Similar to the year 2035 scenario analyzed in Section 4.2.3.5, significant displacement and relocation impacts would occur as a result of the LPA, but could be reduced or avoided through mitigation under existing conditions.

10.3.3.5 Mitigation Measures

Since the same displacements would occur under both the 2035 existing conditions scenarios, the same mitigation measures in Section 4.2.4.2 and Chapter 8 to reduce or avoid displacement and relocation impacts would be implemented under the existing conditions analysis.

10.3.3.6 Conclusion

The displacement and relocation impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.2.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.3.7 CEQA Determination

Under existing conditions, the LPA would have significant direct and cumulative impacts with respect to displacement and relocation. However, these impacts could be reduced or avoided through mitigation.

10.3.4 Community and Neighborhood Impacts

10.3.4.1 CEQA Regulatory Framework

The CEQA regulatory framework for community and neighborhood impacts is described in Section 4.3.1.

10.3.4.2 Affected Environment

The affected environment for community and neighborhood impacts would be the same as the scenario described in Section 4.3.2. None of the anticipated future growth would have occurred. Most of the demographic and community data in Section 4.3.2 is based on observations of existing conditions. Community composition and identities are not anticipated to change substantially between existing conditions and the year 2035.

10.3.4.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Construction-related community and neighborhood impacts would be similar to those described in Section 4.3.3.5. No significant CEQA community and neighborhood impacts would occur under the existing conditions analysis, since construction of the LPA would not cause physical division of any existing communities.

10.3.4.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The smaller rail system and reduced train frequencies of the existing conditions scenario would not affect existing communities and neighborhoods. Operational community and neighborhood impacts would be similar to those described in Section 4.3.3.5. No significant CEQA community and neighborhood impacts would occur under the existing conditions analysis, since operation of the LPA would not cause physical division of any existing communities.

10.3.4.5 Mitigation Measures

Since the community and neighborhood impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.3.4.2 and Chapter 8 to avoid, minimize, or mitigate potentially adverse impacts would be implemented under the existing conditions scenario.

10.3.4.6 Conclusion

The community and neighborhood impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.3.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.4.7 CEQA Determination

Under existing conditions, the LPA would not have significant construction, operation, or cumulative impacts on communities or neighborhoods.

10.3.5 Visual and Aesthetic Impacts

10.3.5.1 CEQA Regulatory Framework

The CEQA regulatory framework for visual and aesthetic impacts is described in Section 4.4.1.

10.3.5.2 Affected Environment

The affected environment for visual and aesthetic impacts would be the same as the scenario described in Section 4.4.2. All of the visual resources, scenic vistas, and scenic resources in Section 4.4.2 already exist and are relevant to the analysis in this section.

10.3.5.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for visual and aesthetic resources would be the same for both scenarios, construction-related visual and aesthetic impacts for the existing conditions analysis would be similar to those described in Section 4.4.3.5.1. No significant reduction in visual quality or viewing context of scenic resources would occur, and no shade or shadow impacts are anticipated.

10.3.5.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any visual or aesthetic effects in the project area. Given that the affected environment for visual and aesthetic resources would be identical for both the year 2035 and existing conditions scenarios, operational visual and aesthetic impacts would be similar to those described in Section 4.4.3.5.2. No significant reduction in visual quality or viewing context of scenic resources would occur, and no shade or shadow impacts are anticipated.

10.3.5.5 Mitigation Measures

Since the visual and aesthetic impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.4.4.2 and Chapter 8 to further reduce less than significant impacts would be implemented under existing conditions.

10.3.5.6 Conclusion

The visual and aesthetic impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.4.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.5.7 CEQA Determination

Under existing conditions, the LPA would not have significant impacts on the visual and aesthetic character of the project area.

10.3.6 Air Quality

10.3.6.1 CEQA Regulatory Framework

The CEQA regulatory framework for air quality impacts is described in Section 4.5.1.

10.3.6.2 Affected Environment

The air quality area of analysis includes the four-county region covered by the South Coast Air Basin or "SoCAB" (all of Orange County and the urban, non-desert portions of Los Angeles, Riverside, and San Bernardino Counties).

This analysis compiled emissions inventories for the existing conditions baseline year (2010). These figures were used to calculate the difference between project and existing (2010) conditions.

Operational emissions in this analysis include emissions from traffic vehicle miles traveled (VMT) and operation of light rail transit (LRT) vehicles. Since LRT vehicles would be operated by electricity, there would be no direct emissions of criteria pollutants. Thus, LRT vehicle-related emissions are not further considered for air quality impacts.

Emission modeling in this analysis considers only passenger vehicles (light-duty automobiles and trucks in the model). This analysis used the EMFAC2007 model to generate emission

factors for these vehicle types. Table 10-3 provides a summary of highway traffic emissions in the project area.

Table 10-3. Existing Conditions (2010) Highway Traffic Emissions

	Emissions					
	VOC	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
Emission Factor (g/mi)	0.077	2.608	0.244	0.004	0.405	0.076
Daily Emissions (lbs/day)	60,136	2,036,818	190,561	3,124	316,300	288,966

Key:
 g/mi = grams per mile
 lbs/day = pounds per day
 VOC = volatile organic compounds
 CO = carbon monoxide
 NO_x = oxides of nitrogen
 SO₂ = sulfur dioxide
 PM₁₀ = particulate matter
 PM_{2.5} = fine particulate matter

10.3.6.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Construction-related air quality impacts would be similar to those described in Section 4.5.3. They may be slightly worse under existing conditions because earlier year equipment would be used, but the equipment would still be in compliance with the emissions standards in effect at the time of construction. Short-term, peak, daily emissions of VOC, NO_x, CO, and PM_{2.5} would exceed thresholds of significance for CEQA.

10.3.6.4 Operational Impacts

Operational emissions associated with the LPA under existing conditions include emissions from highway traffic that would exist after the LPA is operational. The Regional Connector would provide an alternative to automobile transportation in the region; therefore, it was necessary to evaluate highway traffic to assess how the LPA would increase or decrease operational emissions from passenger vehicles.

Table 10-4 shows operational emissions from VMT for the LPA under existing conditions. Emissions of all pollutants would be less than significant per CEQA thresholds.

As shown in Table 10-4, under existing conditions, daily incremental emissions associated with the LPA would decrease for all pollutants; thus all operational emission impacts would be less than significant under CEQA. Cumulative emissions would be beneficial due to the reduction. Overall, vehicular travel would decrease as a result of the LPA. This result would be consistent with air quality goals in the region. No health risk would occur as a result of the LPA because there would be no increase in emissions.

**Table 10-4. Locally Preferred Alternative
Operational Emissions under Existing Conditions**

Type	Emissions (lbs/day)					
	VOC	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}
LPA Emissions	60,105	2,035,750	190,461	3,122	316,134	58,946
Existing Conditions	60,136	2,036,818	190,561	3,124	316,300	58,977
Increment above Existing Conditions	(32)	(1,068)	(100)	(2)	(166)	(31)
CEQA Threshold	55	150	55	550	150	55
Significant?	No	No	No	No	No	No

Note:

Negative numbers (beneficial impacts) are shown in parentheses.

Key:

lbs/day = pounds per day

VOC = volatile organic compounds

CO = carbon monoxide

NO_x = oxides of nitrogen

SO₂ = sulfur dioxide

PM₁₀ = particulate matter

PM_{2.5} = fine particulate matter

The CO hot spots analysis for the 2035 LPA emissions in Section 4.5 resulted in less than significant determinations. Although CO emissions would be higher in 2010 than 2035, the emission factors would have to be more than eight times higher for CO concentrations to exceed the CEQA threshold. The emission factor according to EMFAC2007 is only three times higher, and therefore, under the existing conditions analysis, localized concentrations of CO associated with the LPA are expected to be less than significant.

10.3.6.5 Mitigation Measures

Since the air quality impacts would be similar under both the 2035 and existing conditions scenarios, the same construction mitigation measures in Section 4.5.4.2 and Chapter 8 would be required for the LPA under existing conditions. No operational mitigation measures would be required, since pollutant emissions would decrease as a result of the LPA.

10.3.6.6 Conclusion

The air quality impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.5. Operational emissions would vary, but the LPA would still produce a beneficial reduction in emissions under existing conditions. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.6.7 CEQA Determination

Under the existing conditions, even with implementation of mitigation during construction, regional construction emissions of VOC, NO_x, and CO for the LPA would remain significant and unavoidable under CEQA. With implementation of mitigation identified in Section 4.5.4.2 and Chapter 8, localized construction emissions would be reduced below the maximum allowable emissions under the Localized Significance Thresholds (LST) methodology and therefore, less than significant.

The LPA would have no significant impacts from operational emissions. Although regional construction emissions would be significant and unavoidable, the reduction in regional VMT would result in net benefits to air quality.

10.3.7 Climate Change

10.3.7.1 CEQA Regulatory Framework

The CEQA regulatory framework for climate change is described in Section 4.6.1.

10.3.7.2 Affected Environment

The area of analysis was defined as the SoCAB, which includes all of Orange County and the urban, non-desert portions of Los Angeles, Riverside, and San Bernardino Counties because traffic throughout this entire region would potentially be affected by the LPA.

Data on the VMT in the region and emission factors from the EMFAC2007 model were used to estimate emissions of greenhouse gases (GHG). The emission calculations were based on the total VMT in the region and the average speed on the highway network. Since the EMFAC2007 model only generates emissions of CO₂ and CH₄, the California Climate Action Registry (CCAR) General Reporting Protocol was used to estimate emissions of N₂O. Table 10-5 summarizes the results of the baseline GHG emissions study.

Table 10-5. Existing Conditions (2010) Annual Highway Traffic GHG Emissions

	CO ₂	CH ₄	N ₂ O	Total
Emission Factor (grams per mile)	377.657	0.026	0.173	N/A
Emissions (metric tons per year)	48,934,189	3,369	22,364	N/A
GWP	1	21	310	N/A
CO ₂ e Emissions ¹ (metric tons per year)	48,934,189	70,747	6,932,938	55,937,874

Note:

¹ CO₂e emissions are weighted by the global warming potential (GWP) for each non-CO₂ pollutant (i.e., CO₂e equals emissions of non-CO₂ pollutant x GWP).

Key:

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

CH₄ = methane

GWP = Global Warming Potential

N/A = not applicable

N₂O = nitrous oxide

10.3.7.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Construction-related climate change impacts would be similar to those described in Section 4.6.3. The regional reduction in GHG emissions due to traffic congestion relief combined with the new emissions associated with construction activities would result in a net reduction in emissions.

10.3.7.4 Operational Impacts

Operational emissions associated with the LPA under existing conditions would include indirect emissions from electricity needed to operate the light rail vehicles and direct emissions from the highway traffic. Emissions of GHG from power generation for the electricity needed to operate the light rail vehicles were estimated from the route distance, headway trains, and the average energy intensity for the train operation. Table 10-6 provides a summary of estimated emissions from the light rail operation for the LPA under existing conditions.

**Table 10-6. Locally Preferred Alternative Project Area Light Rail
Annual GHG Emissions under Existing Conditions**

Alternative	Annual CO ₂ e Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	Total
Current energy mix with 8% renewable energy	3,286	2	7	3,295

Key:

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

CH₄ = methane

N₂O = nitrous oxide

Emissions of GHG that would occur from regional traffic for the LPA under existing conditions are summarized in Table 10-7. The emission calculations were based on the total VMT in the region and the average speed on the highway network.

Table 10-7. Locally Preferred Alternative Annual Highway Traffic GHG Emissions under Existing Conditions

	CO ₂	CH ₄	N ₂ O	Total
Emission Factor (grams per mile)	377.657	0.026	0.173	N/A
Emissions (metric tons per year)	48,908,522	3,367	22,353	N/A
GWP	1	21	310	N/A
CO ₂ e Emissions ¹ (metric tons per year)	48,908,522	70,710	6,929,302	55,908,534

Note:

¹ CO₂e emissions are weighted by the global warming potential (GWP) for each non-CO₂ pollutant (i.e., CO₂e equals emissions of non-CO₂ pollutant x GWP).

Key:

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

CH₄ = methane

GWP = Global Warming Potential

N/A = Not applicable

N₂O = nitrous oxide

Emissions of GHG that would occur from regional traffic and light rail operation for the LPA under existing conditions are summarized in Table 10-8. Station emissions would be the same as those reported in Section 4.6.

Table 10-8. Summary of Total Operational GHG Emissions for the Locally Preferred Alternative under Existing Conditions

Mode	Total Operational GHG Emissions (metric tons CO ₂ e per year)			
	CO ₂	CH ₄	N ₂ O	Total
Regional Traffic	48,908,522	70,710	6,929,302	55,908,534
Light Rail	3,286	2	7	3,295
New Stations ¹	737	0	2	739
Total Emissions	48,912,545	70,712	6,929,310	55,912,567
CEQA Increment ²	(21,644)	(35)	(3,628)	(25,307)

Notes:

¹ Emissions from the operation of new stations were not reevaluated in this analysis; rather, the values reflect those previously determined.

² CEQA Increment is defined as the difference between the LPA (2010) and existing conditions (2010).

Key:

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

CH₄ = methane

N₂O = nitrous oxide

Under existing conditions, the LPA would result in a decrease in GHG emissions compared to existing conditions (2010) because of a decrease in highway traffic. The LPA is consistent with California Air Resources Board's (CARB) Scoping Plan requirement to reduce GHG emissions. It is expected that other projects operating would be consistent with the emission reduction targets of Senate Bill 375 (SB 375) and the Regional Transportation Plan (RTP). As a result, emissions would not be cumulatively significant.

10.3.7.5 Mitigation Measures

Similar to the 2035 scenario discussed in Section 4.6, GHG emissions under the LPA would be less than those for existing conditions under existing conditions. The LPA would be consistent with the requirements of CARB's Scoping Plan and SB 375 by increasing regional transportation capacity and decreasing emissions from passenger vehicles. The Regional Connector would also be an important project in the region's need to increase land-use and transportation planning consistent with SB 375 and is identified in SCAG's 2008 RTP. No climate change mitigation measures therefore are required for the LPA under existing conditions.

10.3.7.6 Conclusion

The climate change impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.6. Operational emissions would vary, but the LPA would still produce a beneficial reduction in GHG emissions under existing conditions. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.7.7 CEQA Determination

Under existing conditions, the LPA would result in a regional decrease in GHG emissions. This would be a beneficial impact. No significant climate change impacts would occur as a result of the LPA.

10.3.8 Noise and Vibration

10.3.8.1 CEQA Regulatory Framework

The CEQA regulatory framework for noise and vibration impacts is described in Section 4.7.1.

10.3.8.2 Affected Environment

The affected environment for noise and vibration impacts would be the same as the scenario described in Section 4.7.2. All of the sensitive receptors in Section 4.7.2 already exist and are relevant to the analysis in this section.

10.3.8.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for noise and vibration would be identical for both scenarios, construction-related noise and vibration impacts for the LPA under existing conditions would be similar to those described in Section 4.7.3.5.1. Consistency with the goals of the applicable local ordinances and implementation of best management practices would ensure that noise levels associated with construction of the LPA would not result in a significant impact. Sensitive buildings (Category I,

II, III, IV buildings as defined in Table 4.7-4) or historic buildings within 21 feet of construction may be susceptible to vibration damage. During construction, ground-borne vibration (GBV) and ground-borne noise (GBN) generated by the tunnel boring machine (TBM) would result in potentially significant impacts to the office uses in the Japanese Village Plaza (JVP), the Hikari Lofts, and the Nakamura Tetsujiro Building. The TBM and delivery trains would result in a potentially significant GBN noise impact to the Walt Disney Concert Hall and the Broad Art Foundation Museum, which is currently under construction. These impacts would not be significant after mitigation. Although the Colburn School is properly considered as a Category 3 land use in Section 4.7, if the Colburn School were a Category 1 land use, a potentially significant GBN impact could occur at the Colburn School due to operation of the TBM and delivery trains during construction. In an abundance of caution, the mitigation identified for the Walt Disney Concert Hall has been modified to ensure that GBN generated by the TBM and delivery trains would not impact the sensitive activity occurring at the Colburn School.

10.3.8.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any noise or vibration effects in the project area. Given that the affected environment for noise and vibration would be the same for both the year 2035 and existing conditions scenarios, operational noise and vibration impacts would be the same as those described in Section 4.7.3.5.2. The 2035 scenario uses existing conditions to establish a baseline for measuring future noise impacts, since no significant changes to baseline noise or the noise generated by LRT equipment are anticipated between now and the year 2035. GBN generated by LRT vehicle pass-bys associated with operation of the LPA would result in potentially significant impacts at the Walt Disney Concert Hall, Hikari Lofts, office uses in the JVP, the Nakamura Tetsujiro Building, and the Broad Art Foundation Museum, which is currently under construction. These impacts would not be significant after mitigation. Although the Colburn School is properly considered as a Category 3 land use in Section 4.7, if the Colburn School were a Category 1 land use, a potentially significant GBN impact could occur at the Colburn School from LRT vehicle pass-bys associated with operation of the LPA. In an abundance of caution, the mitigation identified for the Walt Disney Concert Hall has been modified to ensure that GBN generated by LRT vehicle pass-bys would not impact the sensitive activity occurring at the Colburn School.

10.3.8.5 Mitigation Measures

Since the noise and vibration impacts would be the same under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.7.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.8.6 Conclusion

The noise and vibration impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.7.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.8.7 CEQA Determination

Under existing conditions, during construction of the LPA, potential noise impacts would not be significant. Implementation of mitigation measures identified in Section 4.7.4.2.1 would reduce potentially significant vibration impacts to sensitive or historic buildings within 21 feet of construction to less than significant. During construction, GBV and GBN generated by the TBM would result in potentially significant impacts to the office uses in the JVP, the Hikari Lofts, and the Nakamura Tetsujiro Building. GBN generated by the TBM and delivery trains would result in a potentially significant impact to the Walt Disney Concert Hall and the Broad Art Foundation Museum, which is currently under construction. With implementation of mitigation measures identified in Section 4.7.4.2.1 and Chapter 8, potential GBV and GBN impacts during construction would be reduced to less than significant at the locations identified above. All other potential noise and vibration impacts associated with construction of the LPA would not be significant. With implementation of mitigation measures identified in Section 4.7.4.2.1 and Chapter 8, construction of the LPA would not contribute to potentially significant cumulative noise or vibration impacts. As noted above, mitigation for the Walt Disney Concert Hall has been modified to also cover the Colburn School as well, in an abundance of caution.

GBN generated by LRT vehicle pass-bys associated with operation of the LPA would result in potentially significant impacts at the Walt Disney Concert Hall, Hikari Lofts, office uses in the JVP, the Nakamura Tetsujiro Building, the Colburn School, and the Broad Art Foundation Museum, which is currently under construction. With implementation of mitigation identified in Section 4.7.4.2.2 and Chapter 8, potential GBN impacts to the Walt Disney Concert Hall, the Hikari Lofts, office uses in the JVP, the Nakamura Tetsujiro Building, and the Broad Art Foundation Museum, which is currently under construction, would be reduced to less than significant. All other noise and vibration impacts associated with operation of the LPA would be less than significant. With implementation of mitigation measures identified in Section 4.7.4.2.2 and Chapter 8, operation of the LPA would not contribute to potentially significant cumulative noise or vibration impacts. Again, mitigation for the Walt Disney Concert Hall has been modified to also cover the Colburn School as well, in an abundance of caution.

10.3.9 Ecosystems/Biological Resources

10.3.9.1 CEQA Regulatory Framework

The CEQA regulatory framework for ecosystems and biological resources is described in Section 4.8.1.

10.3.9.2 Affected Environment

The affected environment for ecosystems and biological resources would be similar to the scenario described in Section 4.8.2. The survey of trees and other biological resources in Section 4.8.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.9.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for ecosystems and biological resources would be identical for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to those

described in Section 4.8.3.5. An estimated 25 protected native California sycamore trees occur in the potential area of impact and could be affected by the LPA. As project design progresses and construction plans are finalized, it may be possible to minimize the number of trees affected by avoidance or fencing. Mitigation measures described in Section 4.8.4.2, which include consistency with the Native Tree Protection Ordinance, would be required to reduce potential impacts associated with tree removal or disturbance during construction to a less than significant level. Additionally, station landscaping and urban design along the entire alignment would include planting new trees. Therefore, after mitigation, the LPA could result in a net increase in total tree inventory.

Removal or disturbance of mature trees could increase competition for food and nesting habitat for migratory bird species, which could result in a potential indirect impact. Indirect impacts to migratory birds from the LPA would not be significant because the project area provides only low quality habitat for a small number of migratory birds and only a small number of birds (if any) could be displaced.

10.3.9.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on ecosystems or biological resources in the project area. Given that the affected environment for ecosystems and biological resources would be identical for both the year 2035 and existing conditions scenarios, operational impacts would be the same as those described in Section 4.8.3.5. Since the project area is already highly urbanized and the LPA would be consistent with the urban character of the project area, there would be no operational impacts on ecosystems or biological resources.

10.3.9.5 Mitigation Measures

Since the ecosystem and biological resource impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.8.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.9.6 Conclusion

The ecosystem and biological resource impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.8.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.9.7 CEQA Determination

Under existing conditions, with implementation of proposed mitigation measures, the LPA would not have a significant impact on ecosystems or biological resources.

10.3.10 Geotechnical/Subsurface/Seismic/Hazardous Materials

10.3.10.1 CEQA Regulatory Framework

The CEQA regulatory framework for geotechnical/subsurface/seismic/hazardous materials impacts is described in Section 4.9.1.

10.3.10.2 Affected Environment

The affected environment for geotechnical/subsurface/seismic/hazardous materials would be the same as the scenario described in Section 4.9.2. No changes in soil or seismic conditions are anticipated between existing conditions and the year 2035. The survey of regional geology, faulting and seismicity, seiches and tsunamis, mineral resources, and hazardous materials in Section 4.9.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.10.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for geotechnical/subsurface/seismic/hazardous materials impacts would be identical for both scenarios, construction-related impacts for the LPA under existing conditions would be the same as those described in Section 4.9.3.5. There is the potential for liquefaction in portions of the proposed alignment along Flower Street between Wilshire Boulevard and 2nd Street, and along 2nd Street between Hill and San Pedro Streets. A limited portion at the eastern edge of the alignment near the intersection of 1st and Alameda Streets is within the mapped Inundation Hazard Area. There is also the potential for impacts related to liquefaction, seismically-induced settlement, ground loss due to tunnel construction, and landslides for portions of the LPA alignment, but no potential for impacts related to active or potentially active faults, flooding, seiches, or tsunamis. The proposed tunneling would have the potential for impacts related to ground settlement and differential settlement immediately above the alignment as well as adjacent to structures including the historical buildings. With mitigation, potential impacts related to geologic, subsurface, and seismic hazards would be reduced to a less than significant level. During construction of the LPA, there is the potential to encounter hazardous materials along the proposed alignment.

10.3.10.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on the project area from the standpoint of geotechnical/subsurface/seismic/hazardous materials. Given that the affected environment for geotechnical/subsurface/seismic/hazardous materials would be identical for both the year 2035 and existing conditions scenarios, operational impacts would be similar to those described in Section 4.9.3.5. During long-term operation of the LPA, there is the potential for the below-grade portions of the alignment to act as a preferential pathway for existing groundwater contamination to move to areas distant from the project. This impact could be reduced below the level of significance through mitigation.

10.3.10.5 Mitigation Measures

Since the geotechnical/subsurface/seismic/hazardous materials impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.9.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.10.6 Conclusion

The geotechnical/subsurface/seismic/hazardous materials impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.9.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.10.7 CEQA Determination

Under existing conditions, the LPA would have potential impacts associated with liquefaction, seismically induced settlement, ground loss due to tunneling, and hazardous materials during construction and operation. With mitigation, potential impacts would be less than significant.

10.3.11 Water Resources

10.3.11.1 CEQA Regulatory Framework

The CEQA regulatory framework for impacts to water resources is described in Section 4.10.1.

10.3.11.2 Affected Environment

The affected environment for water resources would be similar to the scenario described in Section 4.10.2. The flood hazard zones, groundwater, and responsible agencies in the area are not anticipated to change substantially between existing conditions and the year 2035. The description of baseline water resources in Section 4.10.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.11.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for water resources would be identical for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to those described in Section 4.10.3.5. Tunneling during construction could potentially create a preferential pathway for contaminated groundwater that could be encountered. This could cause the contamination to spread at higher rates than would normally occur without disruption by construction activity. This potential impact would be reduced to a less than significant level with implementation of mitigation measures described in Section 4.10.4.2 and Chapter 8.

10.3.11.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on water resources in the project area. Given that the affected environment for water resources would be identical for both the year 2035 and existing conditions scenarios, operational impacts would be similar to those described in Section 4.10.3.5. Although unlikely during the operation phase of the LPA, groundwater dewatering and subsequent discharge may occur. The tunnel and underground stations would be constructed to preclude gas leakage or groundwater intrusion into the tunnel using a technique similar to that used for the Metro Gold Line tunnels in Boyle Heights. During operation, in the unlikely event that any water accumulates in the tunnel portions of the alignment, it would be pumped out by sump pumps

and treated in accordance with applicable discharge permits before being discharged into the drainage system. Therefore, potential impacts to groundwater would be less than significant.

Operation of the LPA would likely decrease VMT of personal automobiles throughout the project area. An overall reduction in VMT could decrease the primary pollutants associated with all types of transportation operations such as heavy metals, solvents, and petroleum hydrocarbons. This would be a beneficial impact to surface water quality in the project area.

10.3.11.5 Mitigation Measures

Since the water resource impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.10.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.11.6 Conclusion

The water resource impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.10.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.11.7 CEQA Determination

Under existing conditions, the LPA would not have significant impacts with respect to water quality and groundwater contamination after proposed mitigation measures are considered. Compliance with federal, state, and local laws in conjunction with implementation of mitigation measures proposed in Section 4.10.4.2 and Chapter 8 would reduce these potential impacts to a less than significant level.

10.3.12 Energy Resources

10.3.12.1 CEQA Regulatory Framework

The CEQA regulatory framework for impacts to energy resources is described in Section 4.11.1.

10.3.12.2 Affected Environment

The affected environment for energy resources would be similar to the scenario described in Section 4.11.2. The regional annual transportation energy usage data in Section 4.11.2 is based on existing conditions in the year 2009, and is relevant to the analysis in this section.

10.3.12.3 Construction Impacts

Construction of the LPA under existing conditions would result in temporary energy consumption similar to that described in the Section 4.11.3.5. Construction energy consumption in Section 4.11.3.5 was calculated based on construction costs for track elements; stations, stops, and terminals; maintenance facilities; sitework; and systems in base year dollars for the year 2009. The dollar amounts to construct these components of the LPA are converted to British Thermal Units (BTUs) by applying energy consumption factors. The energy consumption factors used in Section 4.11.3.5 are based on 2009 dollars. Given that both the construction costs and the consumption factors are based on 2009 dollars, there would be

minimal change in the construction-related energy consumption for the LPA under existing conditions from what was analyzed in Section 4.11.3.5.

The Los Angeles Department of Water and Power (LADWP) is committed to increasing generation from renewable energy sources as well as ensuring a reliable flow of electricity to users in its service area. In addition, potential construction-related energy resource impacts combined with the beneficial operational impacts of the LPA (as described in Section 10.3.12.4) would result in a net energy benefit. Given the long-term beneficial decreases in energy use associated with the LPA, construction-related impacts would be less than significant.

10.3.12.4 Operational Impacts

In order to analyze the operational energy consumption of the LPA, annual regional highway VMT for existing conditions (2009/2010) and existing conditions plus the LPA were converted to BTU and equivalent barrels of oil. For annual regional traffic, the VMT modeling data show a decrease in VMT and corresponding BTU and equivalent barrels of oil when existing conditions with operations of the LPA are compared to baseline existing conditions. That is, VMT and corresponding BTU and equivalent barrels of oil are less with operations of the LPA than under existing conditions.

While operation of the trains and stations would result in energy expenditures (BTU and equivalent barrels of oil), this energy use would be small compared to the energy reduction derived from decreased VMT and corresponding BTU and equivalent barrels of oil. Thus, operation of the LPA under existing conditions would result in a net decrease of BTU and equivalent barrels of oil expended throughout the region. This would be a beneficial impact on energy resources.

10.3.12.5 Mitigation Measures

Since the energy resource impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation conclusions in Section 4.11.4 would apply. No energy mitigation measures would be required under the existing conditions analysis because all energy impacts are either beneficial or less than significant.

10.3.12.6 Conclusion

The energy resource impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.11.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.12.7 CEQA Determination

Under existing conditions, the LPA would not have significant impacts with respect to energy resources. The overall net energy impacts would be beneficial.

10.3.13 Historic Resources

10.3.13.1 CEQA Regulatory Framework

The CEQA regulatory framework for impacts to historic resources is described in Section 4.12.1.1 for the built environment, Section 4.12.2.1 for archaeological resources, and Section 4.12.3.1 for paleontological resources.

10.3.13.2 Affected Environment

The area of potential effect (APE) used for historic resources analysis in Section 4.12 would also apply for existing conditions because there would be no difference in the physical infrastructure or construction activities proposed as part of the LPA. Since the opening date of the Regional Connector would be earlier, some buildings in the inventory that were evaluated for historic significance in Section 4.12.1 may not be old enough to qualify. This could only lessen impacts to historic resources under existing conditions. No changes to the archaeological or paleontological resources in the project area are anticipated between existing conditions and the year 2035. The description of historic resources in Section 4.12.1.2 for the built environment, Section 4.12.2.2 for archaeological resources, and Section 4.12.3.2 for paleontological resources is based on existing conditions and is relevant to the analysis in this section.

10.3.13.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for historic resources would be similar for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to or less than those described in Section 4.12.1.3.5 for the built environment, Section 4.12.2.3.5 for archaeological resources, and Section 4.12.3.3.5 for paleontological resources.

For the Walt Disney Concert Hall, a substantial adverse impact from GBN could occur during construction, and a substantial adverse impact from GBN could occur during operation. The impact would not be significant, especially if mitigation measures described in Sections 4.12.1.4.2 and Chapter 8 are implemented within the project area.

Potential destruction of portions of the Los Angeles Zanja System could contribute to a cumulative impact to this resource. Implementation of the mitigation measure described in Section 4.12.2.4.2 and Chapter 8 would reduce both direct and cumulative impacts to known archaeological resources, including the Zanja System, to a less than significant level.

Direct impacts on surface or subsurface paleontological resources are the result of destruction by breakage and crushing, typically in construction-related excavations. In areas containing paleontologically sensitive geologic units, surface disturbance has the potential to impact an unknown quantity of surface and subsurface fossils. Without mitigation, these fossils, as well as the paleontological data they could provide if properly salvaged and documented, could be impacted (destroyed), rendering them permanently unavailable. In areas where TBM construction would be used, adequate mitigation would not be possible.

10.3.13.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on historic resources in the project area. Given that the affected environment for historic resources would be similar for both the year 2035 and existing conditions scenarios, operational impacts would be similar to or less than those described in Section 4.12.1.3.5 for the built environment, Section 4.12.2.3.5 for archaeological resources, and Section 4.12.3.3.5 for paleontological resources.

The property acquisition and subsequent demolition of the S. Kamada Restaurant, Atomic Café, Señor Fish, and Coast Imports building would constitute a substantial change that would impair the significance of the historical resource. However, implementation of mitigation measures described in Section 4.12.1.4.2 and Chapter 8 would reduce potential impacts to a less than significant level. GBN would be generated by operations near the Walt Disney Concert Hall, but could be mitigated below the level of significance. Other operational activities would not constitute a substantial change that would impair the significance of historical resources. No permanent operational impacts to archaeological or paleontological resources are anticipated.

10.3.13.5 Mitigation Measures

Since the historic resource impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.12.1.4.2 for the built environment, 4.12.2.4.2 for archaeological resources, and 4.12.3.4.2 for paleontological resources, and Chapter 8 would be required for the LPA under existing conditions. As noted in Section 10.3.13.2, some buildings in the inventory in Section 4.12.1 may not be old enough to qualify for historic status by the earlier opening date analyzed for the LPA under existing conditions, and some of the proposed mitigation measures may not be required for those resources.

10.3.13.6 Conclusion

The historic resource impacts of the LPA under existing conditions would be similar to or less than those described for the 2035 scenario in Section 4.12.1.3.5 for the built environment, 4.12.2.3.5 for archaeological resources, and 4.12.3.3.5 for paleontological resources. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.13.7 CEQA Determination

Under existing conditions, construction of the LPA would potentially result in two direct significant impacts to built environment resources (Belmont Tunnel and Señor Fish) and 14 indirect significant impacts. Implementation of mitigation measures described in Section 4.12.1.4.2 and Chapter 8 would reduce these potential impacts to a less than significant level. Project operation would result in one direct significant impact to a historical resource. Implementation of mitigation measures described in Section 4.12.1.4.2 and Chapter 8 would reduce these potential impacts to a less than significant level. Refer to Table 4.12.1-3 for additional information.

Construction of the LPA has the potential to affect previously unknown archaeological resources. With implementation of mitigation measures, potential construction and cumulative impacts would not be significant under CEQA. The LPA would not result in significant operational impacts to archaeological resources.

The LPA could have impacts on paleontological resources. The LPA would not have significant impacts on paleontological resources with implementation of proposed mitigation measures with the exception of areas where tunneling operations cannot be mitigated. In areas where new underground TBM segments would be constructed, mitigation for paleontological resources would not be feasible and thus construction and cumulative impacts would be significant and unavoidable. The LPA would not result in significant operational impacts to paleontological resources.

10.3.14 Parklands and Other Community Facilities

10.3.14.1 CEQA Regulatory Framework

The CEQA regulatory framework for impacts to parklands and other community facilities is described in Section 4.13.1.

10.3.14.2 Affected Environment

The affected environment for parklands and other community facilities would be similar to the scenario described in Section 4.13.2. The facilities in the area are not anticipated to change substantially between existing conditions and the year 2035. The description of baseline parklands and other community facilities in Section 4.13.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.14.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for parklands and other community facilities would be similar for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to those described in Section 4.13.3.5. No significant construction impacts on parklands or other community facilities are anticipated.

10.3.14.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on parklands or other community facilities in the project area. Given that the affected environment for parklands and other community facilities would be similar for both the year 2035 and existing conditions scenarios, operational impacts would be similar to those described in Section 4.13.3.5. No significant operational impacts on parklands or other community facilities are anticipated.

10.3.14.5 Mitigation Measures

Since the parkland and other community facility impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.13.4.2 and

Chapter 8 to address impacts to bus loading spaces near the Japanese American National Museum (JANM) would be implemented for the LPA under existing conditions.

10.3.14.6 Conclusion

The impacts of the LPA on parklands and other community facilities under existing conditions would be similar to those described for the 2035 scenario in Section 4.13.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.14.7 CEQA Determination

Under existing conditions, the LPA would not have significant impacts on parklands or other community facilities.

10.3.15 Economic and Fiscal Impacts

10.3.15.1 CEQA Regulatory Framework

The CEQA regulatory framework for economic and fiscal impacts is described in Section 4.14.1.

10.3.15.2 Affected Environment

The affected environment for economic and fiscal impacts would be similar to the scenario described in Section 4.14.2. The projected growth between existing conditions and the year 2035 would not occur under existing conditions. The description of businesses and baseline economic characteristics of the project area in Section 4.14.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.15.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the economic and fiscal impacts would be of equal scale for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to those described in Section 4.14.3.5. Construction of the LPA would present adverse economic and fiscal impacts by generating temporary inconveniences, noise, parking reductions, and disruption in business areas. These impacts could be reduced below the level of significance through mitigation.

10.3.15.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on economic or fiscal conditions in the project area. Given that the economic and fiscal impacts would be of equal scale for both the year 2035 and existing conditions scenarios, operational impacts would be similar to those described in Section 4.14.3.5. No significant adverse economic and fiscal impacts are anticipated. Long-term operational impacts of the LPA would be beneficial.

10.3.15.5 Mitigation Measures

Since the economic and fiscal impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.14.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.15.6 Conclusion

The economic and fiscal impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.14.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.15.7 CEQA Determination

Under existing conditions, construction of the LPA would have adverse economic and fiscal impacts as it would affect activity levels and businesses along the alignment. The LPA would not have significant impacts after implementation of proposed mitigation measures.

Under existing conditions, operation of the LPA would have beneficial economic and fiscal impacts by improving accessibility and mobility and reducing travel time and costs in the region. This could encourage greater economic activity and would benefit businesses and commuters. The LPA would also increase employment and tax revenue, representing a beneficial impact to local and regional economies.

10.3.16 Safety and Security

10.3.16.1 CEQA Regulatory Framework

The CEQA regulatory framework for safety and security is described in Section 4.15.1.

10.3.16.2 Affected Environment

The affected environment for safety and security would be the same as the scenario described in Section 4.15.2. The local safety agencies, project area pedestrian facilities, and focus on rail system security are not anticipated to change substantially between existing conditions and the year 2035. The description of baseline safety and security resources in Section 4.15.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.16.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that the affected environment for safety and security would be similar for both scenarios, construction-related impacts for the LPA under existing conditions would be similar to those described in Section 4.15.3.5. Implementation of the mitigation measures are proposed in Section 4.15.4.2 and Chapter 8 would address potential safety concerns during construction. Potential indirect impacts associated with the LPA would not have a detrimental or increased impact on public safety or accidents during construction.

10.3.16.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on safety and security in the project area. Given that the affected environment for safety and security would be similar for both the year 2035 and existing conditions scenarios, operational impacts would be similar to those described in Section 4.15.3.5. The grade-separated configuration of the LPA would avoid pedestrian and motorist safety issues. Potential indirect impacts associated with the LPA would not have a detrimental or increased impact on public safety or accidents during operations.

10.3.16.5 Mitigation Measures

Since the safety and security impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation measures in Section 4.15.4.2 and Chapter 8 would be required under the existing conditions analysis.

10.3.16.6 Conclusion

The safety and security impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.15.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.16.7 CEQA Determination

Under existing conditions, the LPA would not have significant impacts on safety and security with implementation of proposed mitigation measures.

10.3.17 Growth-Inducing Impacts

10.3.17.1 CEQA Regulatory Framework

The CEQA regulatory framework for growth-inducing impacts is described in Section 4.16.1.

10.3.17.2 Affected Environment

The affected environment for growth-inducing impacts would be similar to the scenario described in Section 4.16.2. The projected growth in population, households, and employment between 2008 and 2035 would not occur under existing conditions. The description of baseline population, household, and employment levels in Section 4.16.2 is based on existing conditions and is relevant to the analysis in this section.

10.3.17.3 Construction Impacts

Construction of the LPA under existing conditions would be performed in the same manner described for the 2035 scenario in Chapter 2 and Section 4.18. Given that any growth-inducement that occurs under either scenario would be on a similarly small scale, construction-related impacts for the LPA under existing conditions would be similar to those described in Section 4.16.3.5. The LPA would not directly or indirectly induce growth, and no significant growth-inducing impacts would occur under CEQA.

10.3.17.4 Operational Impacts

Operation of the LPA under existing conditions would be similar to what is described in Chapter 2, except as noted in Section 10.2. The differences described in Section 10.2 would not have any effects on growth-inducing impacts in the project area. Given that any growth-inducement that occurs under either scenario would be on a similarly small scale, operational impacts would be similar to those described in Section 4.16.3.5. The LPA would not directly or indirectly induce growth, and no significant growth-inducing impacts would occur under CEQA.

10.3.17.5 Mitigation Measures

Since the growth-inducing impacts would be similar under both the 2035 and existing conditions scenarios, the same mitigation conclusions in Section 4.16.4 would apply. Since the LPA would not induce growth under either scenario, no mitigation measures would be required.

10.3.17.6 Conclusion

The growth-inducing impacts of the LPA under existing conditions would be similar to those described for the 2035 scenario in Section 4.16.3.5. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.17.7 CEQA Determination

Under existing conditions, the LPA would not have direct or indirect growth-inducing impacts on the project area.

10.3.18 Cumulative Impacts

10.3.18.1 CEQA Regulatory Framework

The CEQA regulatory framework for cumulative impacts is described in Section 4.19.1.2.

10.3.18.2 Affected Environment

The affected environment for the existing conditions scenario would include the same projects anticipated to be completed prior to 2014 in Section 4.19.2.3, including those that were underway as of 2010. None of the future planned projects identified in Section 4.19 would be part of the existing environment. This would result in fewer cumulative impacts, since there could be fewer potential concurrent projects.

10.3.18.3 Construction Impacts

With equal or fewer potential concurrent projects than those listed in Section 4.19, and equal or lesser impacts for all other environmental topics, the LPA would have fewer cumulative construction impacts under existing conditions than under the year 2035 scenario. With incorporation of possible mitigation measures, construction of the LPA could still result in a considerable contribution to cumulative construction impacts associated with bus transit, traffic circulation, pedestrian and bicycle movements, and paleontological resources. Even with implementation of mitigation during construction, regional construction emissions of VOC, NO_x, and CO for the LPA would remain significant and unavoidable under CEQA.

10.3.18.4 Operational Impacts

With equal or fewer potential concurrent projects than those listed in Section 4.19, and equal or lesser impacts for all other environmental topics, the LPA would have fewer cumulative operational impacts under existing conditions than under the year 2035 scenario. Operational cumulative impacts of the LPA would be less than significant, and some would be beneficial. Unlike the year 2035 scenario, where a significant traffic impact would occur at the intersection of Flower and 4th Streets, the LPA would not have this impact under existing conditions.

10.3.18.5 Mitigation Measures

Since there would be equal or fewer cumulative impacts for the LPA under existing conditions, no additional mitigation measures beyond those discussed in Chapters 3 and 4 would be required for the LPA under existing conditions.

10.3.18.6 Conclusion

The cumulative impacts of the LPA under existing conditions would be equal to or less than those described for the 2035 scenario in Chapters 3 and 4. No CEQA impacts unique to the existing conditions analysis would occur.

10.3.18.7 CEQA Determination

Under existing conditions, with implementation of possible mitigation, construction of the LPA would still result in a considerable contribution to cumulative impacts associated with bus transit, traffic circulation, pedestrian and bicycle movements, and paleontological resources. Even with implementation of mitigation during construction, regional construction emissions of VOC, NO_x, and CO for the LPA would remain significant and unavoidable under CEQA. All other cumulative impacts would be less than significant, or less than significant after mitigation.

In addition, the LPA would result in regional VMT reductions, which would reduce emissions generated by motor vehicles and provide net beneficial impacts to air quality and energy consumption. The LPA would also result in beneficial impacts to transit systems, several intersections within the project area, residential land uses, and accessibility and mobility in the region, which would potentially encourage greater economic activity.

10.4 Conclusions

Compared to the year 2035 scenario analyzed in Chapters 3 and 4, the LPA under existing conditions would not introduce any new impacts or require any additional mitigation measures. All impacts would be equal to or less than the impacts of the year 2035 scenario, and the year 2035 mitigation measures would be sufficient to reach the same CEQA determinations provided in Chapters 3 and 4. Transportation and cumulative impacts would be reduced under the existing conditions scenario, and all other impacts would be roughly the same as the year 2035 scenario.