These changes are identified in the form of the mitigation measures above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

Impact 5.3-2: Buildout of the General Plan Update could impact jurisdictional waters and/or wetlands.

Support for this environmental impact conclusion is fully discussed in Section 5.3, *Biological Resources*, of the DEIR, beginning on page 5.3-25 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

The vast majority of the City is built with urban and suburban uses. Implementation of the General Plan Update is expected to concentrate development and redevelopment activities within the specific plan areas of the City, which are currently developed and do not have jurisdictional waters or wetlands. Riparian, wetland, and open water habitat in Arroyo Seco, Eaton Canyon, and Hastings Canyon are jurisdictional waters. No land uses change or development is proposed in these areas, and they will remain designated Open Space – Parks. As a result, jurisdictional waters or wetlands in Arroyo Seco, Eaton Canyon, and Hastings Canyon would not be impacted directly by buildout of the General Plan Update.

Riparian and/or wetland habitats occur in several small drainages in the San Rafael Hills in the western part of the City on the National Wetlands Mapper. Future development of vacant parcels or redevelopment in this area could impact waters of the United States, waters of the state, and wetlands. Such impacts would be subject to the requirements of applicable Section 404 permits from the Corps, Section 401 water quality certification, U.S. Fish and Wildlife Service (USFWS) review, and California Department of Fish and Wildlife (CDFW) 1600 Streambed Alteration Agreements. Proposed General Plan Update Policies 10.9, 10.10, 10.11 further support the goals of protecting open spaces, watersheds, and critical habitats, including Eaton Canyon Corridor and Arroyo Seco, reducing impacts to jurisdictional waters and wetlands. Impacts would be considered potentially significant.

Mitigation Measures:

3-6 Applicants of projects developed pursuant to the General Plan Update shall obtain appropriate permit authorization(s) for impacts to jurisdictional waters, wetlands, and/or riparian habitats. The types of permits potentially required for impacts to jurisdictional waters are a Clean Water Act (Section 404) permit issued by the US Army Corps of Engineers, a California Water Certificate or Waste Discharge Order issued by the Regional Water Quality Control Board, and a Stream Alteration Agreement issued by the California Department of Fish and Wildlife.

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR.

These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

3. Cultural Resources

Impact 5.4-1: Developments pursuant to the proposed General Plan Update project could impact historic resources.

Support for this environmental impact conclusion is fully discussed in Section 5.4, *Cultural Resources*, of the DEIR, beginning on page 5.4-21 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

There are approximately 7,440 historical resources throughout the City listed as or on one of the following registers: State Historical Landmarks, Points of Historical Interests, the California Register of Historical Resources, and the National Register of Historic Places. There are also a number of historic and landmark districts in the City, as shown in Figure 5.4-1 of the DEIR. In addition to the resources that have been officially designated, other structures have the potential to meet National or State Register criteria. A resource may be considered historical resources even if it is not officially registered on the National and State Register or local list.

New development and redevelopment has the potential to occur throughout the City. The proposed land use changes and intensification are identified predominantly in the eight specific plan areas, many of which include historical resources or historic or landmark districts. Therefore, future development may occur in areas that contain significant historical structures, features, and landscapes. Historic neighborhoods have the highest potential for adverse impacts to the historical built environment and cultural landscapes. Under CEQA, a project has a significant impact on a historic resource if it "would result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resources would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1)). Material impairment would occur if the project would result in demolition or material alteration of those physical characteristics that convey the resource's historical significance (CEQA Guidelines Section 15064.5(b)(2)).

Adoption of the General Plan Update in itself would not directly impact any historical structures, resources, or districts because it does not propose or allow for the demolition or alteration of any historical resource. Proposed changes in land use designations and buildout of the proposed land use plan would allow for new development and infill development within or adjacent to historic and landmark districts, which may impact a resources' immediately surrounding area. This could occur throughout the City as individual projects are proposed; however, the greatest potential for this to occur would be where development is concentrated in the proposed specific plan areas. Table 5.4-3 of the DEIR shows landmark and historic districts located in or near the specific plan areas.

As shown in Table 5.4-3 of the DEIR, there are a number of landmark and historic districts within and adjacent to the specific plan areas. Careful consideration of site specific development must occur within and adjacent to these districts to ensure that there are no conflicts or impacts to the resource's immediately surrounding area. Specific examples include the potential for new commercial and mixed uses near the Bungalow Heaven and Historic Highlands Landmark Districts; medium mixed use, high density mixed use, and institutional classifications in the Pasadena Playhouse Districts; medium mixed use, high density mixed use, institutional, and high density residential in the Pasadena Civic Center Landmark District; and medium density residential uses in the Ross Grove Landmark District.

Although the scale and character of new development may affect an adjacent resource, the Land Use Element proposes goals and policies to protect and maintain historic properties and places. With regard to historic and landmark districts, proposed General Plan Policy LU 8.5 considers the scale and character of new construction in landmark and historic districts.

In addition to compliance with Policy LU 8.5, new development would be required to comply with the City's Design Guidelines for Historic Districts, which are based on the Secretary of the Interior's Standards for Historic Preservation. For example, areas along North Lake Avenue adjacent to the Bungalow Heaven National Register District and the Historic Highlands Landmark District would allow for Low Mixed Use (1-1.0 FAR), Low-Medium Mixed Use (0-1.75 FAR), and Low Commercial (0-1.0 FAR). Although the proposed Land Use Diagram would allow new uses with specific FARs adjacent to these landmark and historic districts, new development in this area would still need to comply with the North Lake Specific Plan and development standards (e.g., height, massing, and setback limitations) in Municipal Code Section 17.34.040 and the Urban Design, Sense of Place, and Architectural policies in the land use element. New development in the Pasadena Playhouse and Pasadena Civic Center National Register Districts would be required to comply with the Central District Specific Plan and Design Guidelines for Historic Districts. Adherence to these development standards and design guidelines would ensure that infill development would maintain the character and context of the area, incorporate high quality architectural design, and be compatible with adjacent historical structures. Elements of the historic resources and landmarks that are character defining and convey the resources' significance, including all seven aspects of the resources integrity, would not be altered.

The City of Pasadena has highly qualified design and historical preservation staff to review new development, redevelopment, and reuse of historic structures throughout the City. City staff is also responsible for identifying, designating and reviewing alterations to and demolition of historic resources. Pasadena Municipal Code 17.61.030 has extremely low thresholds for design review to ensure that new development supports the best of the City's architectural tradition. Compliance with the design review process ensures that development enhances the surrounding environment and harmonizes with the surroundings.

Future construction activities adjacent to historic buildings have the potential to result in physical impacts or architectural damage due to construction-related vibration. This impact is analyzed in detail in Section 5.9, *Noise*, of the DEIR under Impact 5.9-5. As discussed, operation of construction equipment such as a vibratory roller at 25 feet from a historic structure could exceed Federal Transit Administration (FTA) vibration thresholds of 0.12 in/sec. Mitigation Measure 9-4 has been incorporated to ensure that impacts from construction activities would not damage a historical resource. Once site specific projects are proposed and construction information is known, the project applicants must submit a vibration assessment and measures that would ensure vibration levels are below FTA's thresholds. With mitigation, impacts would be less than significant.

At the time discretionary development projects are proposed, site-specific project environmental review would need to identify any known or potential historical sites and structures. The proposed Land Use Element contains a number of goals and policies to specifically address sensitive historical resources and their protection. Consistent with CEQA Guidelines, Policy 8.10 ensures projects follow the local, state, and federal historic and cultural preservation requirements, which include but are not limited to the Secretary of Interior Standards for the Treatment of Historic Properties and State Office of Historic Preservation guidance. In addition, the City encourages adaptive re-use of historically and architecturally significant buildings as a means for their restoration and/or preservation through Policy 8.4. Reuse of a historic building would be required to comply with the Secretary of the Interior's Standards for Treatment of Historic Properties, California Historical Building Code, state laws, and best practices (see Policy LU 8.8). This would prevent architecturally inappropriate changes, disrepair, and demolition. Pasadena Municipal Code Section 17.62.090 identifies specific procedures and findings required prior to demolition of a designated historic resource or new construction in a landmark or historic district. Compliance with General Plan polices, provisions of municipal code, and state and federal regulations restricting alteration, relocation, and demolition of historical resources in addition to Mitigation Measure 9-4 would ensure that impacts would be less than significant.

Mitigation Measures:

9-4 Prior to issuance of any construction permits, applicants for individual projects that involve vibration-intensive construction activities, such as pile drivers, jack hammers, bulldozers, and vibratory rollers, within 25 feet of sensitive receptors (e.g., residences) or 50 feet of historic structures, shall prepare and submit to the City of Pasadena Planning Division a study to evaluate potential construction-related vibration impacts. The vibration assessment shall be prepared by an acoustical engineer and be based on the FTA vibration-induced architectural damage criterion. If the study determines a potential exceedance of the FTA thresholds, measures shall be identified that ensure vibration levels are reduced to below the thresholds.

Measures to reduce vibration levels can include use of less-vibration-intensive equipment (e.g., drilled piles and static rollers) and/or construction techniques (e.g., nonexplosive rock blasting and use of hand tools) and preparation of a preconstruction survey report to assess the condition of the affected sensitive structure. Notwithstanding the above, pile drivers shall not be allowed within 150 feet of any historic structures. Identified measures shall be included on all construction and building documents and submitted for verification to the City of Pasadena Planning Division.

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

Impact 5.4-2: Buildout of the proposed General Plan Update could impact archaeological and paleontological resources.

Support for this environmental impact conclusion is fully discussed in Section 5.4, *Cultural Resources*, of the DEIR, beginning on page 5.4-24 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Archaeological Resources

Development of projects pursuant to the proposed General Plan Update could impact known archaeological sites. The record search at the South Central Coastal Information Center (SCCIC) documented five known archaeological sites within the City. Three of the sites were prehistoric sites, including a millingstone site and a trail, and two were historical archaeological sites: Teddy's Camp and a trash deposit. The trash deposit was approximately four feet deep. Locations of archaeological sites and types of resources in each site are kept confidential due to their sensitive nature.

Due to the limited number of archaeological resources documented and the built out nature of the City, impacts to archaeological resources are low. However, development or redevelopment on vacant parcels or infill may occur where deep excavations may unearth previously undisturbed areas. Development of underground parking may result in excavations that unearth unknown archeological resources. In addition, limited development in the hillside areas could disturb artifacts due to the former presence of Native Americans in the region. Since ground disturbance has the potential to uncover archeological resources, this is considered a potentially significant impact.

The results of the Native American consultation did not result in new information or unknown impacts. While there are no known sacred lands within the City, the potential to uncover archaeological resources during grading remains.

Paleontological Resources

Ground disturbance from development of projects pursuant to the proposed General Plan Update could disturb fossils buried in soils. As stated above, areas of the City contain Quaternary Old Alluvial Deposits. Although Quaternary Old Alluvial Deposits in general have the potential to yield fossils, the paleontological sensitivity in these areas of the City is considered low due to its proximity to the mountains to the north. Since the older Quaternary alluvial sediments are close to the sediment source, the uppermost layers of these deposits are likely too coarse grained to preserve fossils. However, abundant fossils occur in the Topanga Formation. The Topanga Formation is in the southwesternmost portions of the City and near the South Fair Oaks specific plan area. Grading and excavations deeper than six feet into the Topanga Formation have the potential to impact significant fossils. This is a potentially significant impact.

Mitigation Measures:

4-1 If cultural resources are discovered during construction of land development projects in Pasadena that may be eligible for listing in the California Register for Historic Resources, all ground disturbing activities in the immediate vicinity of the find shall be halted until the find is evaluated by a Registered Professional Archaeologist. If testing determines that significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; and provide a comprehensive final report including site record to the City and the South Central Coastal Information Center at California State University Fullerton. No further grading shall occur in the area of the discovery until Planning Department approves the report.

4-2 The City shall require applicants for development permits that involve grading in areas within the paleontologically sensitive Topanga formation (see Figure 5.4-2) to provide studies by a qualified paleontologist assessing the sensitivity of the project for buried paleontological resources. On properties determined to be moderately to highly sensitive for paleontological resources, such studies shall provide a detailed mitigation plan, including a monitoring program and recovery and/or in situ preservation plan, based on the recommendations of a qualified paleontologist. The mitigation plan shall include the following requirements:

- A paleontologist shall be retained for the project and will be on call during grading and other significant ground-disturbing activities more than six feet below the ground surface.
- Should any potentially significant fossil resources be discovered, no further grading shall occur in the area of the discovery until the Planning

and Community Development Director concurs in writing that adequate provisions are in place to protect any significant resources. Work may continue outside a minimum radius of 25 feet from the discovery pending review by the Director.

- Unanticipated discoveries shall be evaluated for significance by a qualified paleontologist. If evaluation determines that significance criteria are met, then the project shall be required to perform data recovery, professional identification, radiocarbon dates as applicable, and other special studies; and provide a comprehensive final report, including catalog with museum numbers.

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measures above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

4. Noise

Impact 5.9-3: Buildout of the individual land uses associated with the proposed General Plan Update could expose sensitive uses to strong levels of long-term groundborne vibration from train and industrial use operations.

Support for this environmental impact conclusion is fully discussed in Section 5.9, *Noise*, of the DEIR, beginning on page 5.9-28 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

The following discussion evaluates long-term vibration impacts from vehicles on the local roadways, train operations of the Metro Gold Line, and machinery used in industrial operations.

On-Road Mobile-Source Vibration Impacts

Vibrations from trucks may be noticeable if there are any roadway imperfections such as potholes. However, trucks do not typically generate high levels of vibration because they travel on rubber wheels and do not have vertical movement, which generates ground vibration (FTA 2006). Caltrans, based on its study on the effects of propagation of vehicle vibration on sensitive land uses, notes that "heavy trucks, and quite frequently buses, generate the highest earthborne vibrations of normal traffic." Caltrans further notes that the highest traffic-generated vibrations are along freeways and state routes. Their study finds that "vibrations measured on freeway shoulders (five meters from the centerline of the nearest lane) have never exceeded [0.08 inch] per second, with the worst combinations of heavy trucks. This level coincides with the maximum recommended safe level for ruins and ancient monuments (and historic buildings)" (CalTrans 2002). Vibration-sensitive structures

are not and will not be sited within five meters (approximately 16 feet) of the centerline of the outermost lane of I-210 or SR-134. Therefore, long-term vibration impacts related to on-road vehicles would be less than significant.

Railroad Vibration Impacts

Under the proposed General Plan Update, mixed-use land uses would be permitted along the section of the Metro Gold Line that parallels Arroyo Parkway. In general, vibration levels generated from trains are dependent on specific site conditions such as geology and the condition of the railroad track and train wheels. The Metro Gold Line can generate vibration levels ranging from 64 to 81 decibel velocity (VdB) at distances of 74 feet to 22 feet (AAC 2004). Vibration-sensitive uses could be placed in areas adjacent to the Gold Line at distances as close as 10 feet. Thus, there is potential for these uses to be exposed to vibration that would exceed the FTA vibration standards for vibration-induced architectural damage and vibration annoyance. Therefore, vibration impacts related to train operations are considered potentially significant.

Industrial Vibration Impacts

The use of heavy equipment associated with industrial operations can create elevated vibration levels in its immediate proximity. Under the proposed General Plan Update, industrial uses could be sited near or adjacent to vibration-sensitive land uses. The Walnut Avenue corridor between Mentor Avenue and Kinneloa Avenue would permit industrial land uses. The areas along this corridor that would permit industrial uses would be adjacent to and in close proximity to existing residential uses and areas designated for residential uses. Policy 27.4, Buffering from Adjacent Properties, directs the City to ensure that industrial developments incorporate adequate landscape buffers to minimize any negative impacts to surrounding neighborhoods and development, and controlling (among others) noise and vibration that may impact adjoining uses. The City has not adopted any vibration standards to regulate vibration impacts. Policy 27.4 does not specify measures to reduce vibration from industrial uses to nearby sensitive uses. Therefore, vibration impacts related to industrial operations are considered potentially significant.

Mitigation Measures:

9-1 Prior to issuance of building and occupancy permits, applicants of industrial projects that involve vibration-intensive machinery or activities adjacent to sensitive receptors shall prepare a study to evaluate potential vibration impacts. The study shall prepared by an acoustical engineer and be submitted to the City of Pasadena Planning Division. The study shall evaluate the vibration levels associated with operation of project-related equipment and activities experienced by nearby sensitive receptors. If it is determined that vibration impacts to nearby receptors exceed the Federal Transit Administration (FTA) vibration-annoyance criterion, the study shall

recommend and the applicant shall implement the identified measures with the purpose of reducing vibration impacts to a less than significant level. The City of Pasadena shall verify implementation of all identified measures.

9-2 Prior to issuance of building permits for the new construction of habitable area, applicants for development projects shall adhere to the appropriate Vibration Category 2 and Vibration Category 3 screening distances for light rail transit as recommended in Table 9-2 of the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment (FTA 2006) in evaluating vibration impacts related to trains on the Metro Gold Line. Applicants for development projects that fall within the screening distances shall prepare and submit to the City of Pasadena Planning Division a study evaluating vibration impacts to the proposed development from train operations. The study shall be prepared by an acoustical engineer who shall identify measures to reduce impacts to habitable structures to below the FTA vibration annoyance criterion. The identified measures shall be incorporated into all design plans submitted to the City of Pasadena.

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measures above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

Impact 5.9-5: Construction activities associated with development in accordance with the proposed General Plan Update could expose sensitive uses to strong levels of short-term groundborne vibration that exceed the FTA vibration-induced architectural damage criteria.

Support for this environmental impact conclusion is fully discussed in Section 5.4, *Noise*, of the DEIR, beginning on page 5.9-30 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Vibration generated from operation of construction equipment may cause architectural damage. As shown in Table 5.9-11 of the DEIR, equipment measured at a reference distance of 25 feet can exceed the FTA vibration thresholds. Operation of a vibratory roller at this distance would exceed the 0.12 in/sec FTA architectural damage threshold for historic buildings and the 0.2 in/sec threshold for homes of typical construction. Future land use projects associated with the proposed General Plan Update would likely occur at distances of 25 feet or less to existing vibration-sensitive receptors, possibly historic structures such as those in the Central District Specific Plan area. Vibration generated by construction equipment has the potential to be substantial and result in architectural damage to sensitive structures. Therefore, construction-related vibration-induced architectural damage impacts

associated with buildout of the proposed General Plan Update would be potentially significant.

Mitigation Measures:

9-4 Prior to issuance of any construction permits, applicants for individual projects that involve vibration-intensive construction activities, such as pile drivers, jack hammers, bulldozers, and vibratory rollers, within 25 feet of sensitive receptors (e.g., residences) or 50 feet of historic structures, shall prepare and submit to the City of Pasadena Planning Division a study to evaluate potential construction-related vibration impacts. The vibration assessment shall be prepared by an acoustical engineer and be based on the FTA vibration-induced architectural damage criterion. If the study determines a potential exceedance of the FTA thresholds, measures shall be identified that ensure vibration levels are reduced to below the thresholds. Measures to reduce vibration levels can include use of less-vibration-intensive equipment (e.g., drilled piles and static rollers) and/or construction techniques (e.g., nonexplosive rock blasting and use of hand tools) and preparation of a preconstruction survey report to assess the condition of the affected sensitive structure. Notwithstanding the above, pile drivers shall not be allowed within 150 feet of any historic structures. Identified measures shall be included on all construction and building documents and submitted for verification to the City of Pasadena Planning Division.

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

5. Transportation and Traffic

Impact 5.13-1: Implementation of the General Plan Update would not conflict with the City's plans, ordinances, or policies establishing measures of effectiveness for the performance of the complete circulation system and complies with adopted policies, plans, and programs for alternative transportation.

Support for this environmental impact conclusion is fully discussed in Section 5.13, *Transportation and Traffic*, of the DEIR, beginning on page 5.13-18 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

VMT per Capita and VT per Capita

Under existing conditions, the City's service population of 247,286 drives 5,591,328 vehicle miles (VMT) and makes 686,619 vehicle trips (VT) daily, equivalent to 22.6 VMT per capita

and 2.8 VT per capita. Under the General Plan Update, both VMT per capita and VT per capita are lower than under existing conditions. Under the Refined Project, a service population of 307,321 would drive 6,804,532 VMT per day and make 752,143 vehicle trips per day, which is equivalent to 22.1 VMT per capita and 2.4 vehicle trips per capita (Fehr & Peers 2015). This represents a reduction compared to existing conditions and is less than the significance thresholds. Therefore, no significant adverse impact is anticipated under the General Plan Update. Table 5.13-6 of the DEIR and Appendix F of the Revised FEIR summarizes the citywide per-capita VMT and VT results.

Proximity and Quality of Bicycle Network

A percentage of the City's service population within a quarter mile of each of three bicycle facility types provides a measure of the Proximity and Quality of Bicycle Network. Table 5.13-7 in the DEIR and Appendix F of the Revised FEIR summarizes the service population and percent of total service population within a quarter mile of Level 1, Level 2, and Level 3 bicycle facilities. The Refined Project would experience a substantial increase in higher-quality bicycle facility coverage relative to existing conditions, resulting from the future improvements included in the proposed Mobility Element update. The percent of total service population within a quarter mile of Level 1 or 2 bicycle facilities increases (improves) from 0 percent to 15 percent for Level 1 and 32 percent to 55 percent for Level 2. Overall, 90 percent of the service population would have access to Levels 1, 2, and 3 under the General Plan Update compared to 82 percent under existing conditions (Fehr & Peers 2015). This is primarily due to this increase in bicycle facilities, but also due to increased land use densities near existing bicycle facilities. In addition, the City would be improving and expanding bike facilities by providing increased high-quality bike facilities. No significant adverse impact is anticipated under the General Plan Update.

Proximity and Quality of Transit Network

A percentage of the City's service population within a quarter mile of each of three transit facility types provides a measure of the Proximity and Quality of Transit Network. The Refined Project would experience a substantial increase in higher-quality transit service coverage relative to existing conditions, resulting from the decrease in peak headways on all Pasadena Area Rapid Transit System (ARTS) buses. Table 5.13-8 in the DEIR and Appendix F in the Revised FEIR summarizes the service population and percent of total service population within a quarter mile of Level 1, Level 2, and Level 3 transit facilities. Under the General Plan Update, the percent of total service population within a quarter mile of Level 1 or 2 transit facilities increases (improves) from 37 percent to 50 percent for Level 1 and decreases from 30 percent to 23 percent for Level 2. However, overall 89 percent of the service population would have access to Levels 1, 2, or 3 under the General Plan Update compared to 87 percent under existing conditions. This is primarily due to the increase in service population, but also due to increased land use densities near existing high-frequency transit service. Since the Refined Project would increase the percent of service population

within a quarter mile of Level 1 and 2 facilities (from 67 percent to 73 percent), no significant adverse impacts would result.

Pedestrian Accessibility

The Weighted Pedestrian Accessibility Score (PAS) is a service population-weighted average of the TAZ-level PASs throughout the City. For existing conditions, the weighted PAS is 3.9 (receiving a grade C). A significant impact would occur if there were a decrease in PAS from existing conditions. The Refined Project scores 5.1 (grade B), reflecting improved PAS. This increase is primarily related to an increased diversity of land uses in development areas. No significant adverse impact would occur.

Summary

Implementation of the General Plan Update would result in improved transportation conditions for all performance measures. This supports the Mobility Element's main policy objectives to enhance livability, encourage non-motorized and transit modes of travel, and create a climate for economic viability. In addition, the General Plan Update includes several policies that promote a diversity of land uses and promote the development of infrastructure improvements to support transit, bicycle and pedestrian travel. No significant adverse impacts would occur.

All improvements within the City are funded through the City's transportation fee program with the exception of bicycle and pedestrian improvements. However, policies have been included in the General Plan Update to ensure adequate funding of the City's circulation network. Proposed General Plan Policy 1.30 requires the City to pursue funding opportunities such as grants, impact fees or fair share contributions from development to implement programs and projects that contribute to the City's Mobility Element objectives. Additionally, the funding of pedestrian and bicycle improvements would be accomplished with Policy 2.10 which requires the City to amend the existing transportation impact fee to include pedestrian and bicycle improvements. Without full funding of circulation improvements there would be a significant impact.

Mitigation Measures:

13-1 The City of Pasadena shall update its existing transportation impact fee program by 2020. The City shall prepare a "Nexus" Study that will serve as the basis for requiring development impact fees under AB 1600 legislation, as codified by California Code Government Section 66000 et seq. The established procedures under AB 1600 require that a "reasonable relationship" or nexus exist between the traffic improvements and facilities required to mitigate the traffic impacts of new development pursuant to the proposed project. After approval of the Nexus Study, the City shall update the transportation impact fee program to fund all citywide circulation

improvements, including the pedestrian and bicycle network. The fee program shall stipulate that fees are assessed when there is new construction or when there is an increase in square footage within an existing building or the conversion of existing square footage to a more intensive use. Fees are calculated by multiplying the proposed square footage or dwelling unit by the rate identified. The fees are included with any other applicable fees payable at the time the building permit is issued. The City will use the development fees to fund construction (or to recoup fees advanced to fund construction).

Finding: Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

D. SIGNIFICANT UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Based on the issue area assessment in the EIR, the City has determined that the Refined Project will have significant impacts in the resource areas discussed below, and that these impacts cannot be avoided or reduced despite the incorporation of all feasible mitigation measures. For each significant and unavoidable impact identified below, the City has made a finding(s) pursuant to Public Resources Code § 21081. An explanation of the rationale for each finding is also presented below.

1. Air Quality

Impact 5.2-1: The proposed General Plan Update would be inconsistent with the SCAQMD Air Quality Management Plan as buildout of the proposed Land Use Plan would exceed the current SCAG population and employment estimates and would cumulatively contribute to the nonattainment designations of the SoCAB.

Support for this environmental impact conclusion is fully discussed in Section 5.2, *Air Quality*, of the DEIR, beginning on page 5.2-16 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

CEQA requires that general plans be evaluated for consistency with the Air Quality Management Plan (AQMP). A consistency determination plays an important role in local-agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental effects of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean-air goals in the AQMP. Only new or amended general plan elements, specific plans, and major projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local general plans. Projects that

are consistent with the local general plan are considered consistent with the air quality-related regional plan. There are two key indicators of consistency:

- **Indicator 1:** Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards (AAQS) or interim emission reductions in the AQMP.

- **Indicator 2:** Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

As in the EIR, the Project would not be consistent with the AQMP because air pollutant emissions associated with buildout of the proposed General Plan would cumulatively contribute to the nonattainment designations in the SoCAB. Furthermore, buildout of the proposed General Plan Update would exceed current population and employment estimates for the City of Pasadena and therefore these emissions are not included in the current regional emissions inventory for the SoCAB or in the AQMP. The proposed Land Use Diagram (see Figure 3-5 of the DEIR) would increase density and mixed-use development and would therefore be consistent with regional goals of improving transportation and land-use planning. In addition, the policies of the proposed General Plan would help minimize air pollutant emissions. However, because this additional growth would generate emissions that would cumulatively contribute to the nonattainment designations, the proposed General Plan Update would be considered inconsistent with the AQMP, resulting in a significant impact in this regard.

Mitigation Measures

The proposed General Plan Update would be inconsistent with the SCAQMD Air Quality Management Plan as buildout of the proposed Land Use Plan would exceed the current SCAG population and employment estimates and would cumulatively contribute to the nonattainment designations of the SoCAB. Incorporation of Mitigation Measures 2-1 and 2-2 into future development projects for operation and construction phases described in Impacts 5.2-2 and 5.2-3, infra, would contribute to reduced criteria air pollutant emissions associated with buildout of the proposed General Plan Update. Goals and policies included in the proposed General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SCAQMD thresholds. In addition, the population and employment assumptions of the AQMP would still be exceeded until such time the AQMP is revised and incorporates the projections of the proposed General Plan Update. Therefore, Impact 5.2-1 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.2-1 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

Impact 5.2-2: Construction activities associated with buildout of the proposed General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds and would cumulatively contribute to the nonattainment designations of the SoCAB.

Support for this environmental impact conclusion is fully discussed in Section 5.2, *Air Quality*, of the DEIR, beginning on page 5.2-18 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Construction activities associated with the proposed Land Use Plan would occur over the buildout horizon of the General Plan Update, which would cause short-term emissions of criteria air pollutants. The primary source of nitrogen oxides (NO_x), carbon monoxide (CO), and sulfur oxides (SO_x) emissions is the operation of construction equipment. The primary sources of particulate matter (PM_{10} and $PM_{2.5}$) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of volatile organic compounds (VOC) emissions is the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included in Section 5.2.1, *Environmental Setting: Air Pollutants of Concern*, of the DEIR.

Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity. Due to the scale of development activity associated with buildout of the proposed Land Use Plan, emissions would likely exceed the SCAQMD regional significance thresholds. In accordance with the SCAQMD methodology, emissions that exceed the regional significance thresholds would cumulatively contribute to the nonattainment designations of the SoCAB. The SoCAB is designated nonattainment for O_3 and particulate matter (PM_{10} and $PM_{2.5}$). Emissions of VOC and NO_x are precursors to the formation of O_3. In addition, NO_X is a precursor to the formation of particulate matter (PM_{10} and $PM_{2.5}$). Therefore, the project would cumulatively contribute to the nonattainment

designations of the SoCAB for O_3 and particulate matter (PM_{10} and $PM_{2.5}$). Air quality emissions related to construction must be addressed on a project-by-project basis.

For this broad-based policy General Plan Update, it is not possible to determine whether the scale and phasing of individual projects would exceed the SCAQMD's short-term regional or localized construction emissions thresholds. In addition to regulatory measures (e.g., SCAQMD Rule 201 for a permit to operate, Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, Rule 1403 for new source review, and CARB's Airborne Toxic Control Measures), mitigation imposed at the project level may include extension of construction schedules and/or use of special equipment. Nevertheless, the likely scale and extent of construction activities associated with the proposed General Plan Update would likely continue to exceed the relevant SCAQMD thresholds for some projects. Therefore, construction-related air quality impacts of developments associated with the proposed Land Use Plan would be significant.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. The concentration is required to calculate health risk from project implementation. Projects that exceed the regional significance thresholds will contribute to the current nonattainment designation for ozone and particulate matter. Because the nonattainment designation is based on the AAQS, which are set at levels of exposure that are determined to result in adverse health, the proposed General Plan Update would cumulatively contribute to health impacts within the SoCAB. However, since it is not possible to translate the amount of emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms.

Regional emissions contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, the SCAQMD prepares an AQMP that details regional programs to attain the AAQS. However, because cumulative development within the City of Pasadena would exceed the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standard are met in the SoCAB. In addition to the AQMPs, the SCAQMD has also developed and released the localized significance thresholds (LSTs) to address impacts from criteria air pollutants at a more localized level (discussed in Impact 5.3-4).

Mitigation Measures:

2-1 Prior to issuance of any construction permits, development project applicants shall prepare and submit to the City of Pasadena Planning Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Pasadena Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Division. Mitigation measures to reduce construction-related emissions include, but are not limited to:

- Requiring fugitive-dust control measures that exceed SCAQMD's Rule 403, such as:
    - Use of nontoxic soil stabilizers to reduce wind erosion.
    - Applying water every four hours to active soil-disturbing activities.
    - Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.
- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower.
- Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards.
- Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
- Using Super-Compliant VOC paints for coating of architectural surfaces whenever possible. A list of Super-Compliant architectural coating manufactures can be found on the SCAQMD's website at http://www.aqmd.gov/prdas/brochures/Super-Compliant_AIM.pdf.

Construction activities associated with buildout of the proposed General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds and would cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measure 2-1 would reduce criteria air pollutant emissions from construction-related activities. However, due to the magnitude of emissions anticipated from future construction activities, no mitigation measures are available that would reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.2-2 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.2-2 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

Impact 5.2-3: Buildout in accordance with the proposed General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB.

Support for this environmental impact conclusion is fully discussed in Section 5.2, *Air Quality*, of the DEIR, beginning on page 5.2-20 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

For the purpose of the following analysis, it is important to note that, per the requirements of CEQA, this analysis is based on a comparison of the proposed General Plan Update land-use map to existing land uses and not to the current General Plan land-use map.

It is also important to note that the proposed General Plan Update is a regulatory document that sets up the framework for growth and development and does not directly result in development. Before development can occur, it is required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

The proposed General Plan Update guides growth and development within the City of Pasadena by designating land uses in the proposed Land Use Plan and through implementation of its goals and policies. New development would increase air pollutant emissions in the City and contribute to the overall emissions inventory in the SoCAB. A discussion of health impacts associated with air pollutant emissions generated by operational

activities is included in the *Air Pollutants of Concern* discussion in Section 5.2-1, *Environmental Setting*, of the DEIR.

City of Pasadena Emissions Inventory

The emissions inventory for the City under the proposed General Plan Update is shown in Table 5.2-9, *Buildout Year 2035 City of Pasadena Regional Criteria Air Pollutant Emissions Inventory*, of the DEIR. As shown in the table, implementation of the proposed General Plan Update would result in an increase in criteria air pollutant emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with buildout of the proposed General Plan Update as well as an estimate of population employment in the City in year 2035.

As detailed in the DEIR and Revised FEIR, buildout of the proposed General Plan Update would generate long-term emissions that exceed the daily SCAQMD thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Emissions of VOC and NO_X are precursors to the formation of O_3. In addition, NO_X is a precursor to the formation of particulate matter (PM_{10} and $PM_{2.5}$). Therefore, emissions of VOC and NO_X that exceed the SCAQMD regional significance thresholds would contribute to the O_3 nonattainment designation of the SoCAB. In addition, emissions of NO_X, and $PM_{2.5}$ that exceed the SCAQMD regional significance threshold would also contribute to the particulate matter (PM_{10} and $PM_{2.5}$) nonattainment designation of the SoCAB.

Implementation of the proposed General Plan policies would reduce air quality emissions. Many of these policies promote an increase in concepts and designs that would increase walking, bicycling, and use of public transit, which would contribute to reduced VMT (e.g., Policies LU 4.4, 5.2, 18.1, and 25.8). In addition, Policy 10.20 of the proposed Land Use Element encourages the installation of alternative fueling facilities such as electric chargers. Furthermore, Policy ME 3.5 of the proposed Mobility Element calls for the continued active enforcement of the City's Trip Reduction Ordinance (City Municipal Code Chapter 10.64). However, future development projects could exceed the SCAQMD regional emissions thresholds. Therefore, operational air quality impacts associated with future development of the proposed General Plan would be significant.

The amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. Projects that exceed the regional significance threshold contribute to the nonattainment designation. As the attainment designation is based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health, the proposed General Plan Update would cumulatively contribute to health impacts within the SoCAB. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and decreases in lung function. Particulate matter can also lead to a variety of health effects. These include premature death of people with heart or lung disease,

heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms.

The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, the SCAQMD prepares an AQMP that details regional programs to attain the AAQS. However, because cumulative development within the City of Pasadena would exceed the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time as the attainment standards are met in the SoCAB. In addition to the AQMPs, the SCAQMD has also developed and released the LSTs to address impacts from criteria air pollutants at a more localized level (discussed in Impact 5.3-4).

Mitigation Measures:

2-2 Prior to future discretionary project approval, development project applicants shall prepare and submit to the City of Pasadena Planning Division a technical assessment evaluating potential project operation phase-related air quality impacts. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City of Pasadena Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the Standard Conditions of Approval. Below are possible mitigation measures to reduce long-term emissions:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 § 2485).

- Site-specific development shall demonstrate that an adequate number of electrical vehicle Level 2 charging stations are provided onsite. The location of the electrical outlets shall be specified on building plans, and proper installation shall be verified by the Building Division prior to issuance of a Certificate of Occupancy.

- Applicant-provided appliances shall be Energy Star appliances (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the Building & Safety Division during plan check.

- Applicants for future development projects along existing and planned transit routes shall coordinate with the City of Pasadena, Metro, and Foothill Transit to ensure that bus pads and shelters are incorporated, as appropriate.

Buildout in accordance with the proposed General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. Mitigation Measure 2-2, in addition to the goals and policies of the proposed General Plan Update, would reduce air pollutant emissions to the extent feasible. The measures and policies covering topics such as expansion of the pedestrian and bicycle networks, installation of electric vehicle charging stations, and development and implementation of land use policies that promote public and active transit would also reduce criteria air pollutants within the City. However, due to the magnitude of emissions generated by residential, office, commercial, industrial, and warehousing land uses, no mitigation measures are available that would reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.2-3 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.2-3 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

Impact 5.2-4: Buildout of the proposed General Plan Update could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants.

Support for this environmental impact conclusion is fully discussed in Section 5.2, *Air Quality*, of the DEIR, beginning on page 5.2-22 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Operation of new land uses consistent with the Land Use Plan of the proposed General Plan Update would generate new sources of criteria air pollutants and TACs in the City from area/stationary sources and mobile sources.

Toxic Air Contaminants

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed General Plan would be expected to release TACs. Industrial land uses, such as chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities, have the potential to be substantial stationary sources that would require a permit from SCAQMD for emissions of TACs. Emissions of TACs would be controlled by SCAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under SCAQMD Rule 1401. Until specific future projects are proposed, the associated emissions cannot be determined or modeled at this time. Implementation of the General Plan Update may result in projects that emit TACs, which is a significant impact.

In addition to stationary/area sources of TACs, warehousing operations could generate a substantial amount of diesel particulate matter emissions from off-road equipment use and truck idling. DPM accounts for approximately 84 percent of the excess cancer risk in the SoCAB (SCAQMD 2008). New land uses in the City that use trucks, including trucks with transport refrigeration units, could generate an increase in DPM that would contribute to cancer and noncancer health risk in the SoCAB. Areas where warehousing uses could be developed would generally be limited to the South Fair Oaks and East Pasadena Specific Plan areas and the Walnut Avenue corridor between Mentor and Vista Avenues. These areas are near existing sensitive receptors. Additionally, residential land uses would be permitted in the South Fair Oaks and East Pasadena Specific Plan area. Furthermore, trucks would travel on regional transportation routes through the SoCAB, contributing to near-roadway DPM concentrations. This is considered a significant impact of the project.

Localized Significance Thresholds

LSTs are the amount of project-related emissions at which localized concentrations (ppm or $\mu g/m^3$) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. Per the LST methodology, information regarding specific development projects and the locations of receptors would be needed in order to quantify the levels of impact associated with future development projects. Thus, as the proposed General Plan

Update is a broad-based policy plan, it is not possible to calculate individual project-related emissions at this time. Nevertheless, because of the likely scale of future development that would be accommodated by the project, at least some projects would likely exceed the AAQS. This is considered a significant impact of the project.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. At the time of the 1993 Handbook, the SoCAB was designated nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SCAQMD was designated in attainment for CO under both the California and National AAQS. As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. A CO hotspot analysis was conducted at four busy intersections in Los Angeles at the peak morning and afternoon periods and did not predict a violation of CO standards. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). Buildout of the proposed General Plan would not produce the volume of traffic required to generate a CO hotspot. Therefore, CO hotspots are not an environmental impact of concern for the Project.

Mitigation Measures:

Mitigation Measure 2-1 would also be applicable in reducing construction-related LST impacts.

Goals and policies are included in the proposed General Plan Update that would reduce concentrations of criteria air pollutant emissions and air toxics generated by new development. Review of projects by SCAQMD for permitted sources of air toxics would ensure health risks are minimized. The following mitigation measure would ensure that mobile sources of TACs not covered under SCAQMD permits are considered during subsequent project-level environmental review.

2-3 Prior to future discretionary project approval, applicants for new industrial or warehousing land uses that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as

measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Pasadena Planning Division. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the South Coast Air Quality Management District. If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceeds the respective thresholds, as established by the SCAQMD at the time a project is considered, the applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs), including appropriate enforcement mechanisms, are capable of reducing potential cancer and noncancer risks to an acceptable level. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

Buildout of the proposed General Plan Update could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants. Buildout of the proposed Land Use Plan could result in new sources of criteria air pollutant emissions and/or TACs near existing or planned sensitive receptors. Review of projects by SCAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Mitigation Measure 2-3 would ensure mobile sources of TACs not covered under SCAQMD permits are considered during subsequent project-level environmental review. Development of individual projects would be required to achieve the incremental risk thresholds established by SCAQMD, and TACs would be less than significant.

However, while implementation of Mitigation Measure 2-1 could reduce LST impacts, localized emissions of criteria air pollutants could exceed the SCAQMD significance thresholds because of the scale of development activity associated with theoretical buildout of the General Plan. For this broad-based General Plan Update, it is not possible to determine whether the scale and phasing of individual projects would result in the exceedance of the localized emissions thresholds and contribute to known health effects. Therefore, in accordance with the SCAQMD methodology, Impact 5.2-4 with regards to criteria air pollutants would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.2-4 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

2. Greenhouse Gas Emissions

Impact 5.5-1: Buildout of the proposed General Plan Update would result in a reduction of GHG emissions per service population, however, there would be a substantial increase in GHG emissions compared to existing conditions. Additionally, community-wide GHG emissions would not meet the long-term GHG reductions goal under Executive Order S-03-05.

Support for this environmental impact conclusion is fully discussed in Section 5.5, *Greenhouse Gas Emissions*, of the DEIR, beginning on page 5.5-19 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Implementation of the proposed Land Use Plan would contribute to global climate change through direct and indirect emissions of GHG from land uses within the City of Pasadena. The change in GHG emissions is based on the difference between existing land uses and those associated with the proposed General Plan Update. The community-wide GHG emissions inventory for the City of Pasadena at buildout in year 2035 compared to existing conditions and year 2035 without state and federal reductions (BAU) is included in Table 5.5-5, *General Plan Update Buildout 2035: City of Pasadena GHG Emissions Inventory*, of the DEIR. The adjusted BAU (ABAU) buildout inventory includes reductions from federal and state measures identified in CARB's Scoping Plan, including the Pavley fuel efficiency standards, LCFS for fuel use (transportation and off-road), and a reduction in carbon intensity from electricity use.

As analyzed in the DEIR, state measures identified in the Scoping Plan and federal measures would result in a reduction of 483,341 MT (metric tons) of CO_2e emissions (20 percent reduction) for full buildout compared to BAU. On a per capita basis, buildout of the proposed General Plan Update would reduce the GHG emissions from 7.5 $MTCO_2e$/year/SP under existing conditions down to 6.1 $MTCO_2e$/year/SP. However, buildout of the proposed General Plan Update would result in an increase of 76,525 $MTCO_2e$ of GHG emissions (4 percent increase in GHG emissions) from existing conditions and would exceed the 3,000 $MTCO_2e$ SCAQMD bright-line screening threshold. Consequently, the implementation of the proposed General Plan Update would generate a substantial increase in GHG emissions within the City.

As discussed in Section 6 of the Revised FEIR, the Refined Project would slightly reduce the project's GHG emissions due to the reduction in residential dwelling units and nonresidential square footage at buildout. In addition, the project refinement would slightly decrease mobile source GHG emissions due to a decrease of 158,944 VMT (Fehr & Peers

2015) compared to the previously proposed project. Although there would be a reduction in GHG emissions overall, impacts would be similar and result in a substantial increase in GHG emissions within the City.

Consistency with the Long-Term Goal of Executive Order S-03-05

Executive Order S-03-05 identified a long-term goal of reducing GHG emissions by 80 percent of 1990 levels by 2050. As shown in Table 5.5-5 of the DEIR, the community-wide GHG emissions with reduction measures incorporated in the City for buildout year 2035 would not meet the interim efficiency threshold of 4.0 $MTCO_2e$/year/SP. This interim efficiency threshold measures progress in meeting the Executive Order S-03-05 reduction target.

The proposed General Plan Update includes various policies that would contribute to reduced GHG emissions. These policies cover areas such as higher-density mixed use neighborhoods (Policy LU 18.1), complete street design principles (Policy LU 18.3), and improved pedestrian and bike corridors and connectivity throughout the City (Policies LU 5.1 and 25.8). Policies also include creating transit villages (Policy 4.4), which would place development near the Metro Gold Line stations. These policies would encourage active transit (e.g., walking and biking) and reduce overall VMT per capita. However, while these policies would contribute to reduced GHG emissions, the City would require assistance from additional federal and state programs and regulations to achieve the long-term GHG emissions goal. Due to the magnitude of emissions reductions required statewide to achieve an interim target consistent with Executive Order S-03-05, it is unlikely that the majority of jurisdictions in California would achieve an interim target without additional federal and state programs and regulations. While the 2014 Scoping Plan Update assessed programs to achieve the 2020 targets for the state, at this time, no additional GHG reductions programs have been outlined that get the state to the post-2020 targets identified in Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advances in technology (CCST 2012). Therefore, GHG impacts within the City of Pasadena from the overall growth under the proposed General Plan Update would not achieve the long-term GHG reductions goals under Executive Order S-03-05 and would cumulatively contribute to the long-term GHG emissions in the state.

Mitigation Measures:

5-1 Within approximately 18 months of adoption of the proposed General Plan Update, the City of Pasadena shall prepare and present to the City Council for adoption a community climate action plan/greenhouse gas reduction plan (Plan). The Plan shall identify strategies to be implemented to reduce GHG emissions associated with the City, and shall include as one alternative a program that achieves the AB 32 targets. In addition, the City shall monitor GHG emissions by updating its community-wide GHG emissions inventory

every five years upon adoption of the initial Plan. Upon the next update to the Plan, the inventory, GHG reduction measures, and GHG reductions shall be forecast to year 2035 to ensure progress toward achieving the interim target that aligns with the long-term GHG reduction goals of Executive Order S-03-04. The Plan update shall take into account the reductions achievable from federal and state actions and measures as well as ongoing work by the City and the private sector. The 2035 Plan update shall be completed by January 1, 2021, with a plan to achieve GHG reductions for 2035 or 2040, provided the state has an actual plan to achieve reductions for 2035 or 2040. New reduction programs in similar sectors as the proposed Plan (building energy, transportation, waste, water, wastewater, agriculture, and others) will likely be necessary. Future targets shall be considered in alignment with state reduction targets, to the maximum extent feasible, but it is premature at this time to determine whether or not such targets can be feasibly met through the combination of federal, state, and local action given technical, logistical and financial constraints. Future updates to the Plan shall account for the horizon beyond 2035 as the state adopts actual plans to meet post-2035 targets. In all instances, the Plan and any updates shall be consistent with state and federal law.

Buildout of the proposed General Plan Update would result in a substantial increase in GHG emissions compared to existing conditions. Additionally, community-wide GHG emissions would not meet the long-term GHG reductions goal under Executive Order S-03-05. The climate action plan/GHG reduction plan required by Mitigation Measure 5-1 would ensure that GHG emissions from buildout of the proposed General Plan Update would be minimized. However, the climate action plan may not feasibly obtain the AB 32 targets. Also, additional statewide measures would be necessary to reduce GHG emissions under the proposed General Plan Update to meet the long-term GHG reduction goals under Executive Order S-03-05, which identifies a GHG reduction target of 80 percent from 1990 levels by year 2050. At this time, there is no plan past 2020 that achieves the long-term GHG reduction goal established under Executive Order S-03-05. As identified by the California Council on Science and Technology, the state cannot meet the 2050 goal without major advances in technology (CCST 2012). Since no additional statewide measures are currently available, Impact 5.5-1 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.5-1 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

3. Noise

Impact 5.9-4: Construction activities associated with development in accordance with the proposed General Plan Update could expose sensitive uses to strong levels of short-term groundborne vibration that exceed the FTA vibration annoyance criteria.

Support for this environmental impact conclusion is fully discussed in Section 5.9, *Noise*, of the DEIR, beginning on page 5.9-29 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, and slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures, but can achieve the audible and perceptible ranges in buildings close to the construction site. In assessing vibration annoyance, groundborne vibration is almost never annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers (FTA 2006). Table 5.9-11 of the DEIR lists vibration levels for construction equipment.

As shown in Table 5.9-11, equipment can exceed the FTA vibration annoyance thresholds at 25 feet. Operation of equipment such as a large bulldozer, vibratory roller, and pile driver operating at 25 feet would exceed the vibration annoyance threshold for residential land uses of 78 VdB. Future land use projects associated with the proposed General Plan Update would likely occur at distances of 25 feet or less from existing vibration-sensitive receptors. Therefore, construction-related vibration-related annoyance impacts associated with buildout of the proposed General Plan Update would be potentially significant.

Mitigation Measures:

9-3 Prior to issuance of any grading and construction permits, applicants for individual projects that involve vibration-intensive construction activities, such as pile drivers, jack hammers, and vibratory rollers, within 25 feet of sensitive receptors (e.g., residences and historic structures) shall prepare and submit to the City of Pasadena Planning Division a study to evaluate potential construction-related vibration impacts. The study shall be prepared

by an acoustical engineer and shall identify measures to reduce impacts to habitable structures to below the FTA vibration annoyance criterion. If construction-related vibration is determined to be perceptible at vibration-sensitive uses, additional requirements, such as use of less-vibration-intensive equipment or construction technique, shall be implemented during construction (e.g., drilled piles, static rollers, and nonexplosive rock blasting). Identified measures shall be included on all construction and building documents and submitted for verification to the City of Pasadena Planning Division.

Construction activities associated with development in accordance with the proposed General Plan Update could expose sensitive uses to strong levels of short-term groundborne vibration that exceed the FTA vibration annoyance criteria. Implementation of Mitigation Measure 9-3 would minimize vibration annoyance impacts related to construction activities. However, due to the specific circumstances of future development projects, construction-related vibration annoyance impacts may still occur. Therefore, Impact 5.9-4 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.9-4 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

Impact 5.9-6: Construction activities related to buildout of individual land uses associated with the proposed General Plan Update could substantially elevate noise levels in the vicinity of noise-sensitive land uses.

Support for this environmental impact conclusion is fully discussed in Section 5.9, *Noise*, of the DEIR, beginning on page 5.9-31 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

Construction activities could result in two types of short-term noise impacts. The first type involves the transport of workers and movement of materials to and from the site. This activity could incrementally increase noise levels along local access roads. However, the amount of construction traffic is typically small in relation to the total daily traffic volumes on roadway segments.

The second type of short-term noise impact is related to use of construction equipment. Construction is performed in distinct steps, each of which has its own mix of equipment, and, consequently, its own noise characteristics. Table 5.9-12, *Construction Equipment Noise Emission Levels*, of the DEIR lists typical construction equipment noise levels recommended for noise-impact assessments, based on a distance of 50 feet between the equipment and noise receptor.

Construction of individual developments associated with buildout of the proposed land use plan would temporarily increase the ambient noise environment. As shown, operation of construction equipment could generate high levels of noise—71 to 101 dBA at a reference distance of 50 feet. The City of Pasadena limits construction activities to between the hours of 7:00 AM to 7:00 PM Monday through Friday and from 8:00 AM to 5:00 PM on Saturday in residential districts or within 500 feet therefrom. Additionally, per the municipal code, the City prohibits noise from any powered construction equipment to exceed 85 dBA at a distance of 100 feet from such equipment. Noise Policies 7b, 7c, and 7d would minimize construction-related noise to the extent feasible. However, new development would likely occur in close proximity to noise-sensitive receptors and elevate the ambient noise environment. Furthermore, the construction of future development projects could last for prolonged periods. Because construction activities associated with any individual development may occur near noise-sensitive receptors and noise disturbances may occur for prolonged periods, construction noise impacts from buildout of the proposed General Plan Update are considered significant.

Mitigation Measures:

9-5 Prior to issuance of construction permits, applicants for new development projects within 500 feet of noise-sensitive receptors shall implement the following best management practices to reduce construction noise levels:

- Consider the installation of temporary sound barriers for construction activities immediately adjacent to occupied noise-sensitive structures.
- Equip construction equipment with mufflers.
- Restrict haul routes and construction-related traffic.
- Reduce nonessential idling of construction equipment to no more than five minutes.

The identified best management practices shall be noted on all site plans and/or construction management plans and submitted for verification to the City of Pasadena Planning Division.

Construction activities related to buildout of individual land uses associated with the proposed General Plan Update could substantially elevate noise levels in the vicinity of

noise-sensitive land uses. It is anticipated that the majority of future individual projects would not result in significant construction-related noise impacts with implementation of Mitigation Measure 9-5 and adopted Noise Element Policies 7b, 7c, and 7d. These measures would contribute in minimizing construction-related noise. However, due to the unknown number of construction activities that could occur at one time, proximity of construction activities to sensitive receptors, and other factors that cannot be quantified at this time, such as the longevity of activities, construction-related noise impacts may not be reduced to less than significant levels for some projects. Therefore, Impact 5.9-6 would remain significant and unavoidable.

Finding: Changes or alterations have been required in, or incorporated into, the project that mitigate the significant environmental effect as identified in the EIR. These changes are identified in the form of the mitigation measure above. The City of Pasadena hereby finds that implementation of the mitigation measure is feasible, and the measure is therefore adopted.

However, even with implementation of this measure, significant unavoidable impacts will occur as described above. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.9-6 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

4. Transportation and Traffic

Impact 5.13-2: General Plan Buildout trip generation would result in designated road and/or highways exceeding county congestion management agency service standards.

Support for this environmental impact conclusion is fully discussed in Section 5.13, *Transportation and Traffic*, of the DEIR, beginning on page 5.13-23 and Section 6, *Refined Project Environmental Analysis*, of the Revised FEIR.

The following provides an analysis of impacts to congestion management plan (CMP) arterial intersection and freeways resulting from buildout of the General Plan Update.

Freeway Segment Analysis

Freeway segment volumes based on model data were used to analyze impacts to three mainline CMP freeway monitoring locations identified within the City of Pasadena along the State Route 134 (SR 134) and I-210 freeways:

- Route 134, at postmile R12.09, west of San Rafael Avenue
- Route 210, at postmile R23.55, west of Routes 134/710
- Route 210, at postmile R29.72, Rosemead Boulevard

In accordance with the CMP guidelines, freeway (mainline) operating conditions during peak periods were evaluated using the general procedures established by the CMP. As described in

Section 6 of the FEIR, the project would have a significant impact related to the CMP if buildout of the General Plan Update would increase traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing level of service (LOS) F (V/C > 1.00). If the facility is already at LOS F, a significant impact occurs when the Project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02).

Table 5.13-9 in the DEIR shows the results of the CMP analysis for mainline segments under existing conditions and Table 4 in the Revised FEIR shows the results of the CMP analysis under Refined Project buildout conditions. The General Plan Update results in significant impacts to two freeway segments. One impacted location, westbound I-210 west of Rosemead Blvd, is operating at LOS F under existing conditions during the AM peak hour. The General Plan Update would increase the traffic at this location by more than two percent during the peak hour. The other impact also occurs on I-210 westbound, west of the SR 134/I-710 interchange, during the PM peak hour. The traffic increases would cause that location to operate at LOS F (0).

Arterial Intersection Analysis

The following four CMP arterial monitoring stations (i.e., intersections) were evaluated using the CMA/Circular 212 method at four locations:

- Arroyo Parkway and California Boulevard (CMP ID #119)
- Pasadena Avenue and California Boulevard (CMP ID #120)
- St. John Avenue and California Boulevard (CMP ID #120)
- Rosemead Boulevard and Foothill Boulevard (CMP ID #121)

Table 5.13-11 in the DEIR shows the results of the CMP arterial intersection analysis for existing conditions and Table 4 in the Revised shows the results of the CMP arterial intersection analysis for buildout of the Refined Project. Implementation of the General Plan Update would result in a significant project impact at the intersection of Pasadena Avenue at California Boulevard during the AM peak hour. Impacts at all other CMP intersections are less than significant.

Mitigation Measures:

Mitigation measures were considered for the freeway and arterial CMP impacts identified above. The mitigation measures were determined to be infeasible for the reasons set forth below. The traditional response to mitigate significant traffic-related impacts, which are defined as delays to autos due to overcapacity, or increases in auto trips on street segments, is to increase auto capacity by providing additional lanes or facilities. Widening roads to provide additional travel lanes is challenging because the spaces are already constrained and utilized by other land uses or transportation facilities. Due to the limited right-of-way in Pasadena, capacity improvements of this nature for autos can require a loss or constriction

of bicycle lanes or sidewalks. The traffic analysis for this project could not identify any additional capacity improvements for autos that would not have negative secondary impacts such as delaying transit or degrading the pedestrian environment. However, implementation of the proposed General Plan goals and policies regarding walking, bicycling, transit use, transit-oriented development, and TDM would improve mobility within the City.

Freeway Mainline Segments

- **Route 210, at postmile R23.55, w/o Routes 134/710 –** the westbound direction is impacted at this location in the PM peak hour. The mitigation measure identified for this location is the addition of a mainline travel lane to the freeway. Implementing this mitigation within the existing right-of-way would require the removal of the left-hand shoulder, resulting in substandard conditions on the I-210 freeway. Furthermore, a mitigation resulting in increased automobile capacity through roadway widening is inconsistent with the General Plan's goals and policies.

- **Route 210, at postmile R29.72, Rosemead Boulevard –** the westbound direction is impacted at this location in the AM peak hour. The mitigation measure identified for this location is the addition of a mainline travel lane to the freeway. There is insufficient space to implement this mitigation within the existing right-of-way. Furthermore, a mitigation resulting in increased automobile capacity through roadway widening is inconsistent with the General Plan's goals and policies.

Arterial Intersections

- **Pasadena Avenue and California Boulevard (CMP ID #120) –** this location is impacted in the AM peak hour. The mitigation measure identified for this location is the conversion of one westbound through lane to a shared through/right-turn lane. This mitigation measure would degrade the pedestrian environment by creating two lanes of right-turning traffic that would conflict with pedestrians crossing the north and east legs of the intersection, inconsistent with the General Plan's goals and policies related to improving access to destinations by pedestrians.

There are no feasible mitigation measures available to reduce impacts to CMP freeway segments and an arterial intersection to below a level of significance. For the reasons stated above, improvements to freeway segments require an additional mainline travel lane, which either requires removal of a left hand shoulder resulting in substandard freeway conditions or there is insufficient existing right-of-way. Increasing automobile capacity through roadway widening is also inconsistent with the General Plan's goals and policies. Mitigation for Pasadena Avenue and California Boulevard would require conversion of one westbound through lane to a shared through/right-turn lane. As discussed above, this mitigation measure would degrade the pedestrian environment and is inconsistent with the proposed General Plan's goals and policies related to improving access to destinations by pedestrians.

The mitigation measures identified above would reduce impacts to CMP facilities but are not considered feasible and are in conflict with proposed General Plan goals and policies. In addition, improvements to the I-210 are within the responsibility and jurisdiction of another agency, Caltrans. The City of Pasadena cannot control whether the I-210 improvements would be approved or implemented. Therefore, impacts at CMP facilities would be significant and unavoidable.

Finding: The City finds that there are no mitigation measures that are feasible. Therefore, the City finds that specific economic, legal, social, technological, or other considerations make it infeasible to reduce Impact 5.13-2-4 to a less than significant level. (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)) (Public Resources Code §§ 21081(a)(1), (3); Guidelines §§ 15091(a)(1), (3)).

E. Findings on Project Alternatives

Alternatives Considered and Rejected During the Scoping/Project Planning Process

The City finds that all of the alternatives eliminated from further consideration in the Draft EIR are infeasible, would not meet most project objectives and/or would not reduce or avoid any of the significant effects of the Project, for the reasons detailed in below and in Section 7 of the EIR.

The following is a discussion of the alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in the EIR.

1. Alternative Development Areas

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. In considering alternative locations, the first question in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (Guidelines Sec. 15126.6[f][2][A]). The Project is a General Plan Update for the City of Pasadena. The General Plan is specific to the City and its jurisdiction; it is also specific to the natural, social, and cultural environments within the City and sphere of influence (SOI). The City does not have jurisdiction over areas outside of its boundaries and SOI and cannot impose General Plan policies on such areas. Therefore, an alternative development area for the Project is not possible.

2. No Growth/No Development Alternative

The No Project/No Development Alternative would prohibit all new development, restricting urban growth to its current extent. The population would remain at existing levels,

approximately 135,938 residents. No alterations to the City would occur (with the exception of previously approved development), and all residential development and commercial and industrial uses would generally remain in their current conditions. Some minor population growth could occur within the City, to the extent that existing residential units or units that have already been approved could accommodate additional residents (e.g., a decrease in vacancy rates). None of the impacts of the proposed General Plan Update, adverse or beneficial, would result. Future conditions within the City, except for the impacts of regional growth, would generally be the same as existing conditions, which were described in the environmental setting section for each environmental topic.

Implementation of this alternative would not provide adequate housing supply required to meet the City's obligations to provide its fair share of affordable housing. Furthermore, this alternative would not achieve any of the objectives established for the Project. As a result, this alternative has been rejected from further consideration.

3. Jobs-Housing Balance Alternatives

Two development alternatives aimed at generating "jobs-housing balance" citywide were explored during the early stages of EIR development. The jobs-housing ratio is a general measure of the total number of jobs to housing units in a defined geographic area, without regard to economic constraints or individual preferences. The balance of jobs and housing in an area—in the total number of jobs and housing units as well as the type of jobs versus the price of housing—has implications for mobility , air quality, and the distribution of tax revenues. The jobs-housing ratio is one indicator of a project's effect on growth and quality of life in the project area. The two jobs-housing balance alternatives that were considered increased both dwelling units and employment-generating land uses in a ratio that would growth and create City-wide balance between jobs and housing. The purpose of this alternative was to reduce VMT, which would result in a reduction in air quality impacts and GHG emissions.

After review of the alternatives by Pasadena Planning Commission and the Transportation Advisory Commission, it was determined that the goal of this alternative to reduce VMT was not being met by focusing on a citywide jobs-housing balance. The jobs-housing balance needs to be considered from a broader perspective, since Pasadena operates in a regional jobs and housing market. Further, the commissions recognized the difficulty in formulating an alternative for the City that would match the needs of the job market with the skills and education of the residents. Therefore, the commissions directed staff to revise the alternative by using a different metric to more effectively achieve a reduction in VMT, resulting in greater reductions to air quality, GHG, noise, and traffic impacts. This became the Efficient Transportation Alternative and is discussed below.

Alternatives Selected for Further Analysis

The following alternatives were determined to represent a reasonable range of alternatives with the potential to feasibly attain most of the basic objectives of the project but avoid or substantially lessen any of the significant effects of the project.

- No Project/Adopted General Plan Alternative
- Central District, South Fair Oaks, and Lincoln Avenue Alternative
- Efficient Transportation Alternative
- Reduced Air Quality and Noise Impact Alternative

An EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the Project and determined to be environmentally superior, neutral, or inferior. Impacts found significant and unavoidable are primarily used in making the final determination of whether an alternative is environmentally superior or inferior to the Project. Only the impacts involving air quality, greenhouse gas emissions, noise, and traffic were found to be significant and unavoidable. Section 7.8 of the DEIR identifies Central District, South Fair Oaks, and Lincoln Avenue (CD, SFO, LA) Alternative as "environmentally superior" to the Project.

1. No Project/Adopted General Plan Alternative

Description: Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the impacts of the "No-Project" Alternative. When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the no-project alternative is the continuation of the plan, policy, or operation into the future. Therefore, under the No Project/Adopted General Plan Alternative, the current Land Use Diagram would remain in effect. All proposed changes to land uses and boundaries in the specific plan areas would not occur. Development in accordance with the adopted General Plan would continue to occur, allowing for a total of 6,472 new residential units and 12,327,747 square feet of nonresidential space, 5,849 less units and 1,338,788 more nonresidential square feet than the Project. This alternative would be based on the existing policies, Land Use Diagram, and system of development caps. The adopted General Plan did not provide a cap for areas outside of specific plans, which at the time included Lincoln Avenue, so staff has provided a forecast of growth for these areas.

Environmental Effects: The No Project/Adopted General Plan Alternative would have similar impacts for aesthetics, biological resources, cultural resources, and noise. Impacts would be reduced for air quality, public services, recreation, and utilities and service systems. This alternative would result in an increase in impacts to GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, population and

housing, and transportation and traffic. Significant unavoidable adverse impacts identified by the Project for air quality, GHG emissions, and noise would not be eliminated. Although this alternative would eliminate the CMP arterial intersection impact at Pasadena Avenue and California Boulevard, it would create a new significant impact at Rosemead Boulevard and Foothill Boulevard. This alternative would also create a new significant impact by increasing VMT per capita over existing.

Ability to Achieve Project Objectives: The adoption of the No Project/Adopted General Plan Alternative would leave the City open for future growth that may not be compatible with its goals and objectives. In addition, such growth would not provide the mix of uses and housing that would be allowed under the General Plan Update. The No Project/Adopted General Plan Alternative fails to accomplish the project objectives in the City's vision and has other potential environmental impacts resulting from its implementation. Specifically, this alternative does not promote higher residential density or mixed-use development near transit opportunities (Objective 1); it would not reduce VMT per capita (Objective 2) pursuant to local, regional, and state goals; and it does not reduce GHG emissions consistent with AB 32, SB 375, and SB 743 (Objective 9).

Finding: This alternative is not environmentally superior to the Project and is rejected as infeasible because it would not accomplish all of the project objectives (Objectives 1, 2, and 9) and it would result in two new significant impacts. Specifically, this alternative would increase the severity of a significant unavoidable adverse GHG impact due to an increase in VMT and VMT per capita (see Section 7.4.13 of the DEIR; Fehr & Peers 2014). Further, although this alternative would eliminate the CMP arterial intersection impact at Pasadena Avenue and California Boulevard, it would create a new significant impact at Rosemead Boulevard and Foothill Boulevard. (Fehr & Peers 2014) Significant unavoidable impacts would remain for air quality, GHG emissions, noise, and traffic. In addition, this alternative would result in an increase in impacts to air quality, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, population and housing, and transportation and traffic.

2. Central District, South Fair Oaks, and Lincoln Avenue Alternative

Description: The Central District, South Fair Oaks, and Lincoln Avenue (CD, SFO, LA) Alternative was analyzed for its ability to reduce air quality, GHG emissions, and transportation impacts by reducing the development caps in the Central District, South Fair Oaks, and Lincoln Avenue specific plans. The intent was to reduce impacts along the three major corridors, Colorado Boulevard, South Fair Oaks, and Lincoln Avenue. This alternative would build out to 146,023 jobs (3.7 percent less than the proposed General Plan Update) and a population of 159,628 (2 percent less). This would result in a total service population (jobs plus residents) of 305,651 (3 percent less than the proposed General Plan Update) in the City.

Lamanda Park Specific Plan

During discussions for consideration of the CD, SFO, LA Alternative, members of City Council discussed the potential of modifying the CD, SFO, LA Alternative to shift units between East Colorado, East Pasadena, and a new Lamanda Park Specific Plan. The portion of the project within the current boundaries of East Pasadena Specific Plan west of the I-210 would be the new specific plan, known as Lamanda Park, instead of being moved to East Colorado Specific Plan. The overall development cap within this area would be the same, totaling 1,350 units. The residential development cap would be reallocated to allow 500 units in East Colorado, 100 units in Lamanda Park, and 750 units in East Pasadena.

Since the overall residential unit cap within this area is the same and the distribution of units would be similar to the CD, SFO, LA Alternative with respect to location, the comparison of analysis to the Project and impact conclusions identified for the CD, SFO, LA Alternative in the DEIR would be the same as the Lamanda Park Specific Plan Alternative.

Environmental Effects: The CD, SFO, LA Alternative would have similar impacts for aesthetics, biological resources, hydrology and water quality, land use and planning, population and housing, and transportation and traffic impacts. Impacts would be reduced for air quality, cultural resources, GHG emissions, hazards and hazardous materials, noise, public services, recreation, and utilities and service systems. Although this alternative would reduce environmental impacts in eight impact categories, significant unavoidable adverse impacts identified by the Project for air quality, GHG emissions, noise, and traffic would not be not be avoided or substantially lessened.

Ability to Achieve Project Objectives: The adoption of the CD, SFO, LA Alternative would meet most of the project objectives but to a lesser degree in some cases. For example, this alternative would not have the same level of density or diversity of housing stock in the Central District as the Project (Objective 1). It also results in a slight increase in VMT per capita (Objective 2) compared to the Refined Project.

Finding: The EIR determined that the CD, SFO, LA Alternative would be environmentally superior to the previously proposed project (DEIR Section 7.8) and the Refined Project (Revised FEIR Section 6). However, this alternative is rejected as infeasible because it would not accomplish all of the project objectives to the same degree as the Refined Project. Specifically, the CD, SFO, LA Alternative would not provide the same level of density or diversity of housing in the Central District (Objective 1) because it would result in a reduction of 703 residential units in the Central District (Revised FEIR Table 1, Section 6). The CD, SFO, LA would also not provide the same level of economic vitality and fiscal responsibility because it would result in a reduction of 118 jobs compared to the Refined Project (Revised FEIR Appendices C and F). This alternative would result in a reduced annual fiscal benefit to the City by approximately $40,000 (ADE 2015, Table 5-1).