

# **IV. Environmental Impact Analysis**

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## **L. Traffic**

### **1. Introduction**

This section of the Draft EIR presents the transportation and traffic analysis of the Project. This evaluation considers the impacts of the Project with respect to all transportation modes, including vehicular, transit, bicycle, and pedestrian, as well as the effects related to freeway on- and off-ramps in the Project vicinity. The analysis that follows includes a description of the existing conditions of the Project Site and surrounding area, the regulatory framework that guides the decision-making process, the methodologies used in the analysis, thresholds for determining if the Project would result in a significant impact on transportation and circulation, mitigation measures where necessary to reduce the severity of potentially significant impacts, and the level of significance after mitigation. The potential for cumulative impacts is also discussed. The analysis is based on the *Transportation Impact Analysis, CEQA Evaluation, Category 2 (Traffic Study)* prepared for the Project by the Pasadena Department of Transportation (DOT) (May 8, 2017) and included as Appendix L of this Draft EIR.

### **2. Environmental Setting**

#### **a. Regulatory Framework**

##### **(1) Section 131(a) of Title 23 of the United States Code (USC)**

Section 131(a) of Title 23 of the USC controls the erection and maintenance of outdoor advertising signs, displays, and devices in areas adjacent to the Interstate System and the primary system in order to promote the safety and recreational value of public travel and to preserve natural beauty. Specifically applicable to the Project is Section 131(c) of Title 23 of the USC, which prohibits the placement of advertising signs, displays, or devices within 660 feet from the right-of-way, visible from the main traveled way of the primary system, other than those advertising activities conducted on the property on which they are located, which may be changed at reasonable intervals by electronic process or by remote control.

## (2) Senate Bill 743

With its passage in 2013, Senate Bill (SB) 743 reformed the analysis and evaluation of traffic impacts under CEQA. SB 743 requires the Governor's Office of Planning and Research (OPR) to amend the CEQA guidelines and replace the Level of Service metric (i.e., auto delay, congestion) with alternative criteria that encourage reductions in greenhouse gas emissions, multimodal transportation network-related development, and increased diversity of land uses.<sup>1</sup> In 2014, the OPR responded by publishing preliminary updates and identifying alternative criteria. The primary metric was identified as vehicle miles traveled (VMT). In 2016, the OPR published a revised proposal that adhered to VMT in evaluating transportation impacts.<sup>2</sup>

## (3) California Outdoor Advertising Act

The California Outdoor Advertising Act (CBPC Section 5200, *et seq.*) regulates outdoor advertising displays visible from California Highways by outlining qualitative criteria that aim to eliminate the potential for distractions through limiting the content and placement of signs. Provisions relevant to the Project include the following:

- Section 5403(e) of the CBPC prohibits the placement of signs displaying any red or blinking or intermittent light likely to be mistaken for a warning or danger signal in a location that is visible from a highway.
- Section 5403(h) of the CBPC prohibits the placement of signs displaying any flashing, intermittent, or moving light or lights in a location that is visible from a state regulated highway.
- Section 5405(d)(1) of the CBPC prohibits the placement of advertising displays within 660 feet from the edge of the right-of-way of any interstate or primary highway, other than message center displays that comply with all requirements of this chapter of the California Business & Professions Code. However, this section prohibits the message center displays to use flashing, intermittent, or moving lights, or message change that is in motion or appears to be in motion or that changes in intensity or exposes its message for less than four seconds. No message center display may be placed within 1,000 feet of another message center display on the same side of the highway. No message center display may be placed in violation of Section 131 of Title 23 of the USC (see above).

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<sup>1</sup> Governor's Office of Planning and Research, *Alternative Transportation Metrics (SB 743), Updating the Analysis of Transportation Impacts Under CEQA*, [www.opr.ca.gov/s\\_sb743.php](http://www.opr.ca.gov/s_sb743.php), accessed March 15, 2017.

<sup>2</sup> Governor's Office of Planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, January 20, 2016.

- Section 5408(b) of the CBPC prohibits the placement of the following in a business area: (1) illuminated signs in a manner that would interfere with the effectiveness of, or obscure any official traffic sign, device, or signal in a business area; (2) signs illuminated by flashing, intermittent, or moving lights (except that part necessary to give public service information such as time, date, temperature, weather, or similar information) in a business area; and (3) signs that cause beams or rays of light to be directed at the traveled ways if the light is of an intensity or brilliance as to cause glare or to impair the vision of any driver, or to interfere with any driver's operation of a motor vehicle.

#### (4) Los Angeles County Congestion Management Program

As a result of the State-mandated program requiring every county to develop a congestion management plan (CMP), Los Angeles County Metropolitan Transportation Authority (Metro) developed the County's Congestion Management Program in 2010. The 2010 CMP requires that a traffic impact assessment include, at minimum, all CMP arterial monitoring intersections where a project will add 50 or more trips during either the A.M. or P.M. weekday peak hours of adjacent street traffic, and CMP arterial segments where a proposed project will add more 50 or more peak-hour trips, and mainline freeway monitoring locations where the project will add 150 or more peak-hour trips, in either direction, during the A.M. or P.M. weekday peak hours. In addition, CMP transit analysis require a summary of existing transit service in the Traffic Study area, the project's trip-generation estimates, the project's transit trip estimates, project components including facilities and programs to encourage public transit use, and analysis of transit impacts and mitigations, if any. Caltrans must also be consulted through the Notice of Preparation (NOP) process to identify other specific locations to be analyzed on the State highway system.

#### (5) City of Pasadena

##### *(a) General Plan Mobility Element*

The City's General Plan Mobility Element was adopted in 2015 as an update to the 2004 Mobility Element. Based on the City's Guiding Principle related to mobility, Pasadena envisions itself in the future as "a city where people can circulate without cars."<sup>3</sup> In addition, the Mobility Element addresses state regulations that have been designed to evaluate transportation needs within the context of the community and region, and also presents a comprehensive plan to meet such needs. The Mobility Element addresses strategies to promote non-auto travel, public transit services, parking approaches, bicycle

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<sup>3</sup> Pasadena Department of Transportation, 2015 Mobility Element 2015, August 2015.

facilities, car-sharing programs, and pedestrian components that are coordinated and connected with a regional transportation system.

*(b) Pasadena Transportation Impact Analysis Guidelines*

The City developed and adopted its Transportation Impact Analysis Current Practice and Guidelines (TIA guidelines) to ensure that transportation system improvements necessary to support new development while maintaining the quality of life within the community are identified prior to project approval and funded prior to construction.<sup>4</sup> In supporting the City's vision, the TIA guidelines promote an integrated and multimodal transportation system that provides choices and accessibility for everyone living and working in the City.<sup>5</sup> For all proposed projects not categorically exempt, transportation impact analyses are an integral part of the environmental review process under CEQA. The City has adopted a set of performance measures and CEQA thresholds that are closely aligned with the Mobility Element objectives and policies. The mobility performance measures assess the quality of walking, biking, transit, and vehicular travel in the City. A combination of vehicular and multimodal performance measures are employed to evaluate system performance in reviewing new development projects. Such measures include VMT per Capita, Vehicle Trips (VT) per Capita, Proximity and Quality of the Bicycle and Transit Network, and Pedestrian Accessibility. These performance measures align with the sustainability goals of the General Plan by evaluating the efficiency of projects by analyzing the per capita length and number of trips associated with changes in land use. With the expanded emphasis on sustainability and a continued focus on livability, the performance measures inform decisions related to the balance of travel modes and provide further understanding of the community's mobility needs.

The TIA Guidelines apply to all projects that require environmental review in accordance with CEQA and the City's established Environmental Policy Guidelines, significance thresholds, and transportation review guidelines. The TIA Guidelines differentiate analyses between projects that are exempt, within CEQA thresholds, and analyses to be evaluated outside the CEQA process. As further discussed below, the specific CEQA thresholds determine a project's expected level of impact on the transportation system and identify appropriate types of mitigation.

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<sup>4</sup> Pasadena Department of Transportation, *Transportation Impact Analysis Current Practice and Guidelines*, 2015.

<sup>5</sup> Pasadena Department of Transportation, *Transportation Impact Analysis Current Practice and Guidelines*, 2015.

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(c) *Pasadena Municipal Code*

(i) *Congestion Management Program*

Chapter 10.64 of the Pasadena Municipal Code (PMC) implements the requirements of Metro's Congestion Management Program, in accordance with California Government Code Sections 65089 and 65089.3 and provisions of Metro's model trip-reduction ordinance.

Section 10.64.020 of the PMC requires that certain development projects incorporate a Transportation Demand Management (TDM) program plan.<sup>6</sup> Such projects include mixed-use developments with 50 or more residential units or 50,000 square feet or more of non-residential development, or non-residential projects that exceed 75,000 square feet. TDM plans must be reviewed and approved by the Director of Pasadena DOT prior to the issuance of a building permit. Thereafter, updates on the implementation of the transportation plan are to be submitted for review and approval annually. TDM plans are required to include project description; site conditions that affect commute travel; TDM plan measures; evaluation criteria for reviewing TDM plans; and duties, responsibilities, and qualifications of a certified Employee Transportation Coordinator.

The demand for vehicle commute trips must be reduced by ensuring that the design of major residential and non-residential development projects will accommodate facilities for alternative modes of transportation. The TDM plan may include, but is not limited to, the strategies, such as promotional rideshare events, pay parking for employees, guaranteed ride home, private vanpool operations, bikeway linkages to established routes, transit pass and vanpool fare subsidies, reduced-parking fees for non-solo drivers, provision of a certified Employee Transportation Coordinator, and commuter matching service for all employees on an annual basis and new employees upon hiring.

The TDM plan will be required to be reviewed and approved by the Pasadena DOT, which may substitute alternative measures of equivalent cost and effectiveness at its discretion.

(ii) *Signage*

Signage is regulated by the PMC. The regulations applicable to the Project include the following:

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<sup>6</sup> *Pasadena, California Municipal Code, Section 10.64.020.*

- Section 17.48.130.H, Prohibited Signs, of the PMC prohibits signs that (1) are electronic message signs except time and/or temperature signs; (2) imitate an official traffic sign or signal, or contain the words “stop,” “go,” “slow,” “caution,” “danger,” “warning,” or similar words, excepting construction signs and barricades, and except when the words are incorporated in the permanent name of a business; (3) are oriented towards the freeway; and (4) blink, flash, or move in any manner, have any portions that move, or have the appearance of moving, except for signs listed in the historic sign inventory, clocks, time and temperature displays, public service signs and unique/creative signs are allowed through the approval of a Master Sign Plan.
- Section 17.48.170 of the PMC defines a sign as “A device, fixture, surface, or structure of any kind, made of any material, displaying letters, numbers, words, text, illustrations, symbols, forms, patterns, colors, textures, shadows, merchandise or lights; or any other illustrative or graphic display designed, constructed, or placed on the ground, on a building, architectural projection, wall, post, or structure of any kind, in a window, or on any other object for the purpose of advertising, identifying or calling visual attention to any place, structure, firm, enterprise, profession, business, service, product, commodity, person, or activity whether located on the site, in any structure on the site or in any other location. The term ‘placed’ includes constructing, erecting, posting, painting printing, tacking, nailing, gluing, sticking, sculpting, casting, or otherwise fastening, affixing, or making visible in any manner.”
- Section 12.15.050, Signs Confused With Traffic Signals, of the PMC also prohibits signs that display or make use of the words, such as “stop,” “look,” “danger,” or any other word, phrase, symbol, or character that could interfere with, mislead, or confuse traffic.

## **b. Existing Conditions**

The Project Site is comprised of two campuses in the City of Pasadena. The Hillside Campus is located at 1700 Lida Street, and the South Campus consists of five parcels currently located at 870, 888, 950, and 988 South Raymond Avenue and 1111 South Arroyo Parkway. The two campuses are approximately 5 miles apart and are connected via a shuttle system.

No development is located immediately adjacent to the Hillside Campus. More distant surrounding uses in the vicinity include single-family residences to the north, south, east, and single-family homes in the City of Glendale to the west. The Scholl Canyon Golf and Tennis Club is located approximately 0.5 mile to the southwest. The nearest freeway access is I-210 at Howard Street, approximately 1.5 miles to the east. The Brookside Golf Club is located approximately 0.5 mile to the east. Just south of Brookside Golf Club and southeast of the Hillside Campus is the Rose Bowl, a 93,000-seat stadium, which hosts

college football games and numerous events throughout the year, including concerts and other large outdoor events. Pursuant to PMC Chapter 3.32, up to 15 displacement events are allowed a year at the Rose Bowl without further approval by City Council. A few times per year, ArtCenter detours their shuttles through the City of Glendale to avoid Rose Bowl event crowds; however, most events at the Rose Bowl occur primarily on the weekends and weeknights; therefore, ArtCenter shuttle routes often remain unaffected and travel north on Linda Vista Avenue and east on Lida Street.

The South Campus is surrounded by commercial and light industrial uses, including, but not limited to, offices, restaurants, service commercial facilities, commercial storage, The Rose Palace (a float construction facility for the Tournament of Roses Parade), two veterinary hospitals, and the Pasadena Water and Power's Broadway/Glenarm Power Plant. In addition, the Metro Gold Line bisects the South Campus with the Fillmore Street Station located 300 feet north of the Project Site.

The Project is proposing infrastructure improvements and building renovations at the Hillside Campus, while development at the South Campus would be focused on growth and expansion. Specifically, at Project buildout, the South Campus would be comprised of new buildings for student housing and student amenities, outdoor quad areas, and a campus Cycleway and mobility hub. As discussed in detail in Section II, Project Description, of this Draft EIR, the Project would be implemented in two phases: Phase I (the first five years of the Project, although it could be completed as early as 2022) and Phase I plus Phase II, representing Project buildout (2022–2032).

### (1) Existing Street System

The existing street system in the study area consists of freeways, primary and secondary arterials, and collector and local streets that provide regional, sub-regional, and local access and circulation with the area. The classifications of the street system in the study area are provided below.

- Linda Vista Avenue—Linda Vista Avenue is a north/south-oriented minor arterial that provides primary regional access to the Hillside Campus. The City's street classification for this roadway is Neighborhood Connector. This roadway generally provides one travel lane in each direction and has a posted speed limit of 35 miles per hour (mph). Linda Vista Avenue is designated as a Class III Enhanced Bike Route.
- Lida Street—Lida Street is an east/west-oriented minor arterial that provides primary access to the Hillside Campus. The City's street classification for this roadway is Neighborhood Connector. This roadway provides one travel lane in each direction and has a speed limit of 30 mph west of Knollwood Drive and

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25 mph east of Knollwood Drive. Lida Street is designated as a Class II Bike Lane west of Lancashire Place and a Class III Bike Route east of Lancashire Place.

- Salvia Canyon Road—Salvia Canyon Road is an east/west-oriented road that provides access to and from the Rose Bowl from Linda Vista Avenue. The City's street classification for this roadway is Access Road. This roadway provides two travel lanes in each direction between Linda Vista Avenue and West Drive and has a speed limit of 35 mph. Salvia Canyon Road is not a designated bike lane or route.
- West Drive—West Drive is a north/south-oriented road that runs along the west side of the Rose Bowl stadium and Brookside Golf Club. The City's street classification for this roadway is Neighborhood Connector. This roadway provides one travel lane in each direction and has a speed limit of 40 mph. West Drive is designated as a Class III Bike Route.
- Seco Street—Seco Street is an east/west-oriented road that connects West Drive and just east of I-210. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in each direction and has a posted speed limit of 35 mph. Parking is generally allowed on the south side of the street. Seco Street is designated as a Class III Bike Route.
- Rosemont Avenue—Rosemont Avenue is a north/south-oriented road that extends from Arroyo Boulevard to the north to Orange Grove Boulevard to the south. The City's classification for this roadway is Neighborhood Connector. This roadway provides two travel lanes in each direction and has a speed limit of 30 mph from Arroyo Boulevard to Seco Street and 25 mph from Seco Street to Orange Grove Boulevard. Rosemont Avenue is not a designated bike lane or route between Seco Street and Orange Grove Boulevard.
- Orange Grove Boulevard—Orange Grove Boulevard is an east/west-oriented road that provides access to the SR-110, SR-134 and I-210 freeways. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in each direction and has a speed limit of 35 mph. Orange Grove Boulevard is designated as a Class III Enhanced Bike Route.
- Walnut Street—Walnut Street is an east/west-oriented multi-modal corridor and a truck route. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in each direction with turn lanes at key intersections and has a posted speed limit of 30 mph east of Fair Oaks Avenue and 35 mph west of Fair Oaks Avenue. Walnut Street is not designated as a bike lane or route.
- Raymond Avenue—Raymond Avenue is a north/south-oriented road that provides primary access to the South Campus. The City's classification for this

roadway is Neighborhood Connector between Corson Street and Del Mar Boulevard and a City Connector between Del Mar Boulevard and Glenarm Street. This roadway provides two travel lanes in each direction in the vicinity of the South Campus and has a posted speed limit of 35 mph between California Boulevard and Glenarm Street and 30 mph between California Boulevard and Green Street. Raymond Avenue is designated as a Class II Bike Lane north of Orange Grove Boulevard and a Class III Bike Route between Orange Grove Boulevard and Maple Street. There are no bike lanes south of Maple Street.

- Fair Oaks Avenue—Fair Oaks Avenue is a north/south-oriented road that is designated as a multimodal corridor one block to the west of the South Campus. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in each direction and has a posted speed limit of 35 mph between Columbia Street and Green Street, 30 mph between Green Street and Mountain Street, and 35 mph north of Mountain Street. Fair Oaks Avenue is not designated as a bike lane or route.
- Arroyo Parkway—Arroyo Parkway is a north/south-oriented road that is designated as a multimodal corridor and provides primary access to the South Campus. The City's classification for this roadway is Access Road between Holly Street and Colorado Boulevard and City Connector between Colorado Boulevard and SR-110. South of Colorado Boulevard, this provides two travel lanes in each direction and has a posted speed limit of 35 mph in the Project vicinity. Arroyo Parkway is not designated as a bike lane or route.
- Pasadena Avenue—Pasadena Avenue is a north/south-oriented road located two blocks west of the South Campus that provides access to I-210 and SR-134. The City's classification for this roadway is City Connector. This roadway is a two-way street between Columbia Street and just south of Bellefontaine Street and provides two travel lanes in each direction. At Bellefontaine Street, it is a one-way northbound roadway and has a posted speed limit of 35 mph. Pasadena Avenue is designated as a Class II Bike Lane.
- Saint John Avenue—Saint John Avenue is north/south-oriented road that is a one-way roadway from Walnut Street to Bellefontaine Street. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in the southbound direction and has a posted speed limit of 35 mph between Walnut Street and Del Mar Boulevard and 30 mph between California Boulevard and Bellefontaine Street. Saint John Avenue is designated as Class II Bike Lane.
- Colorado Boulevard—Colorado Boulevard is an east/west-oriented road that is designated a multimodal corridor approximately 1 mile north of the South Campus. The City's classification for this roadway is City Connector. This roadway provides two travel lanes in each direction with turn lanes at all intersections and a speed limit that varies from 25 mph in the business district to

30 to 35 mph outside the business district. Colorado Boulevard is not designated as a bike lane or route.

- Del Mar Boulevard—Del Mar Boulevard is an east/west-oriented road that is approximately 0.66 mile north of the South Campus. The City’s classification for this roadway is City Connector. This roadway generally provides two lanes in each direction and has a posted speed limit of 35 mph. Del Mar Boulevard is designated as a Class III Bike Route between Saint John Avenue and Wilson Avenue and a Class III Enhanced Bike Route east of Wilson Avenue.
- California Boulevard—California Boulevard is an east/west-oriented roadway that is approximately 0.33 mile north of the South Campus. The City’s classification for this roadway is City Connector. This roadway provides one travel lane in each direction west of Orange Grove Boulevard, two travel lanes in each direction east of Orange Grove Boulevard to Lake Avenue, and one travel lane in each direction east of Lake Avenue. California Boulevard has a posted speed limit of 30 mph within the study area. California Boulevard is designated as a Class III Bike Route between Marengo Avenue and Lake Avenue and a Class III Enhanced Bike Route between Lake Avenue and Allen Avenue.
- Glenarm Street—Glenarm Street is an east/west-oriented roadway that serves as the southerly border of the South Campus. The City’s classifications of this roadway are Access Road between Pasadena Avenue and Fair Oaks Avenue, City Connector between Fair Oaks Avenue and Arroyo Parkway, and Neighborhood Connector between Arroyo Parkway and El Molino Avenue. This roadway provides one westbound through travel lane and two eastbound through travel lanes crossing the intersection of Raymond Avenue and Glenarm Street. This roadway has a posted speed limit of 25 mph west of Arroyo Parkway and 35 mph east of Arroyo Parkway. Glenarm Street is designated as a Class III Bike Route between Pasadena Avenue and Marengo Avenue and a Class II Bike Lane east of Marengo Avenue.

## (2) Existing VMT and VT

The City of Pasadena TIA Guidelines address two vehicular performance metrics: VMT per capita and VT per capita. The existing Citywide VMT per capita is 22.6, and the existing Citywide VT per capita is 2.8.

## (3) Existing Alternative Transportation

### (a) Bikeways

Both the Hillside Campus and South Campus are located within 0.25 mile of existing bicycle facilities. Bicycle facilities within 0.25 mile of the Hillside Campus include the following:

- Class II Bike Lane on Lida Street west of Lancashire Place
- Class III Bike Route on Lida Street east of Lancashire Place

Bicycle facilities within 0.25 mile of the South Campus include the following:

- Class III Bike Route on Glenarm Street between Pasadena Avenue and Marengo Avenue
- Class II Bike Lane on Glenarm Street east of Marengo Avenue to El Molino Avenue
- Class II Bike Lane on Marengo Avenue between Cordova Street and Glenarm Street.

As shown in Table IV.L-1 on page IV.L-12, the City of Pasadena Draft Bicycle Transportation Plan identifies three hierarchical levels for bicycle facilities:

Multimodal transportation is encouraged with the availability of bicycle racks on Metro, Pasadena Area Rapid Transit System (Pasadena Transit), and City of Los Angeles Department of Transportation (LADOT) buses and at each Metro Gold Line Station. In addition, bicycles are allowed onto Metro Gold Line trains. Currently, 31.7 percent of the Citywide service population (i.e., population plus jobs) is located within 0.25 mile of Level 1 and 2 bicycle facilities.

*(b) Transit*

As shown in Table IV.L-2 on page IV.L-12, the City of Pasadena identifies three hierarchical levels for transit facilities. Table IV.L-3 on page IV.L-13 outlines the public transit service within the study area.

The Project area is currently served by Pasadena Transit, Metro, and ArtCenter shuttles. Transit facilities within 0.25 mile of the Hillside Campus include the following:

- Pasadena Transit Lines 51, 52
- ArtCenter shuttles (every 20–25 minutes between campuses)

Transit facilities within 0.25 mile of the South Campus include the following:

- Fair Oaks Avenue at Hurlbut Street (Pasadena Transit Lines 20, 51, 52)

**Table IV.L-1  
Bicycle Facilities Hierarchy**

<b>Level</b>	<b>Description</b>	<b>Facilities Included</b>
1	Advanced Facilities	<ul style="list-style-type: none"> <li>• Bike Paths</li> <li>• Multipurpose Paths</li> <li>• Cycle Tracks/Protected Bicycle Lanes</li> </ul>
2	Dedicated Facilities	<ul style="list-style-type: none"> <li>• Buffered Bike Lanes</li> <li>• Bike Lanes</li> <li>• Bike Boulevards</li> </ul>
3	Basic Facilities	<ul style="list-style-type: none"> <li>• Bike Routes</li> <li>• Enhanced Bike Routes</li> <li>• Emphasized Bikeways</li> </ul>
<hr/> <p><i>Source: Pasadena Department of Transportation, 2017.</i></p>		

**Table IV.L-2  
Transit Facilities Hierarchy**

<b>Level</b>	<b>Facilities Included</b>
1	Includes all Gold Line stops as well as corridors with transit service, whether it be a single route or multiple routes combined, with headways of five minutes or less during the peak periods.
2	Includes corridors with transit headways of between 6 and 15 minutes in peak periods.
3	Includes corridors with transit headways of 16 minutes or more at peak periods.
<hr/> <p><i>Source: Pasadena Department of Transportation, 2017.</i></p>	

- Raymond Avenue at Glenarm Street (Pasadena Transit Lines 51, 52; Metro Lines 686, 687)
- Fair Oaks Avenue at Glenarm Street (Pasadena Transit Line 20; Metro Lines 260, 762)
- Arroyo Parkway at Glenarm Street (Pasadena Transit Line 20)
- Glenarm Street at Fair Oaks Avenue (Pasadena Transit Lines 20; Metro Lines 686, 687)
- Fair Oaks Avenue at Bellefontaine Street (Pasadena Transit Lines 20, 51, 52; Metro Lines 260, 686, 687)

**Table IV.L-3  
Existing Transit Service**

<b>ID</b>	<b>Location</b>	<b>Route</b>
1	Fair Oaks Ave. at Hurlbut St. – Northeast corner	PT Line 20
2	Raymond Ave. at Glenarm St. – Northeast corner	PT Lines 51, 52; Metro Lines 686, 687
3	Fair Oaks Ave. at Bellefontaine St. – Northeast corner	PT Line 20; Metro 260
4	Fair Oaks Ave. at Glenarm St. – Northeast corner	PT Line 20; Metro Lines 260, 762
5	Arroyo Parkway at Glenarm St. – Northwest corner	PT 20
6	Glenarm St. at Fair Oaks Ave. – Southeast corner	PT Line 20; Metro Lines 686, 687
7	Arroyo Parkway at Glenarm St. – East side	PT 20 Line
8	Fair Oaks Ave. at Glenarm St. – Northwest corner	Metro Lines 260; 762
9	Fair Oaks Ave. at Bellefontaine St. – Southwest corner	PT Lines 20, 51, 52; Metro Lines 260, 686, 687
10	Raymond Ave. at Fillmore St. – East side	Metro Gold Line
11	Arroyo Parkway at Fillmore St. – Northeast corner	PT Line 20
12	Raymond Ave at Fillmore St. – Northeast corner	PT Lines 51, 52; Metro Lines 686, 687
13	Arroyo Parkway at Fillmore St. – Southwest corner	PT Line 20
14	Fair Oaks Ave at Hurlbut St. – Southwest corner	PT Lines 20, 51, 52
<hr/> <p><i>PT = Pasadena Transit</i>  <i>Metro = Los Angeles County Metropolitan Transportation Authority</i>  <i>Source: Pasadena Department of Transportation, 2017.</i></p>		

- Raymond Avenue at Fillmore Street (Pasadena Transit Lines 51, 52; Metro Gold Line, Metro Lines 686, 687)
- Arroyo Parkway at Fillmore Street (Pasadena Transit Line 20)

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(c) *Pedestrian*

The pedestrian circulation system in the City of Pasadena is comprised of sidewalks, crosswalks, intersection and mid-block traffic controls, and signal technology. The City of Pasadena determines pedestrian accessibility based on a Pedestrian Accessibility metric, which is discussed further below. The current score is 3.88.

### **3. Project Impacts**

#### **a. Methodology**

##### (1) City of Pasadena Analysis

Pursuant to the TIA Guidelines, the Project was evaluated using the City's transportation performance measures. Proposed projects are analyzed using the City's calibrated travel demand forecasting (TDF) model built on SCAG's regional model. The City's TDF model uses TransCAD software to simulate traffic levels and travel patterns for the City. The program consists of input files that summarize the City's land uses, street network, travel characteristics, and other key factors. Using this data, the model performs a series of calculations to determine the amount of trips generated, the beginning and ending location of each trip, and the route taken by the trip. To be deemed accurate for project transportation impact on the transportation system, a model must be calibrated to a year in which actual land use data and traffic volumes are available and well documented. The Pasadena TDF has been calibrated to 2013 base year conditions using actual traffic counts, Census data, and land use data compiled by City staff with land uses' associated population and job increase estimates. The methodology of the specific performance assessment is provided below.

##### (a) *VMT Per Capita*

The VMT per Capita measure sums the miles traveled for trips within the City of Pasadena Travel Demand Model (that is based on the SCAG regional model). The VMT total considers 100 percent of the mileage of trips that begin and end inside Pasadena and 50 percent of the distance traveled for trips with one end outside of Pasadena. The City's VMT is then divided by the City's total service population, defined as the population plus the number of jobs.

Although total citywide VMT would likely increase with the addition of new residents, the City can reduce VMT on a per capita basis with land use policies that help Pasadena residents meet their daily needs within a short distance of home, reducing trip lengths, and by encouraging development in areas with access to various modes of transportation other than auto.

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*(b) VT Per Capita*

VT per Capita is a measure of motor vehicle trips associated with the City. The measure sums the trips with origins and destination within the City, as generated by the 2013 trip-based Citywide Travel Demand Model. The regional VT is calculated by adding the VT associated with trips generated and attracted within City boundaries, and 50 percent of the VT associated with trips that either begin or end in the City but have one trip end outside of the City. The City's VT is then divided by the City's total service population, defined as the population plus the number of jobs.

As with VMT, total citywide VT would likely increase with the addition of new residents, but the City can reduce VT on a per-capita basis with land use policies that help Pasadena residents meet their daily needs within a short distance of home, reducing trip lengths, and by encouraging development in areas with access to various modes of transportation other than auto.

*(c) Proximity and Quality of Bicycle Network*

The Proximity and Quality of Bicycle Network metric provides a measure of the percent of the City's service population within 0.25 mile of bicycle facilities, which are identified by type in Table IV.L-1 on page IV.L-12. For each bike facility level, a 0.25-mile network distance buffer is identified, and the total service population within the buffer area is calculated. The City can improve measures of Bicycle Facility Access by improving and expanding existing bike facilities and by encouraging residential and commercial development in areas with high-quality bike facilities.

*(d) Proximity and Quality of Transit Network*

The Proximity and Quality of Transit Network metric provides a measure of the percent of the City's service population within 0.25 mile of transit facilities, which are identified by type in Table IV.L-2 on page IV.L-12. For each transit facility level, a 0.25-mile network distance buffer is identified, and the total service population within the buffer area is calculated. The City can improve the measures of Transit Proximity and Quality by reducing headways on existing transit routes, by expanding transit routes to cover new areas, and by encouraging residential and commercial development to be sited in areas with an already high-quality transit service.

*(e) Pedestrian Accessibility*

Proximity and Quality of Pedestrian Environment score provides a measure of the average walkability in the Traffic Analysis Zones (TAZs) surrounding Pasadena residents, based on a Pedestrian Accessibility metric. The Pedestrian accessibility metric is a simple

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count of the number of land use types accessible to a Pasadena resident or employee in a given TAZ within a 5-minute walk. The ten categories of land uses are:

- Retail;
- Personal Services;
- Restaurant;
- Entertainment;
- Office (including private sector and government offices);
- Medical (including medical office and hospital uses);
- Culture (including churches, religious and other cultural uses);
- Park and Open Space;
- School (including elementary and high schools); and
- College.

*(f) Cumulative Impacts*

The City's 2015 General Plan and its Mobility and Land Use Elements are used to assess the cumulative impacts of the Project. The recently adopted General Plan update and amendment focus on transportation, community, and sustainability in order to become "a city where people can circulate without cars." The impacts analysis is cumulative as the incremental changes in the identified transportation performance measures are compared to Citywide adopted thresholds.#

## (2) Congestion Management Plan Screening Analysis

As previously discussed, CMP guidelines require that a traffic impact assessment include, at minimum, the assessment of CMP arterial monitoring intersections and mainline freeway monitoring locations, specifically:

- All CMP arterial monitoring intersections where the Project will add 50 or more trips during either the A.M. or P.M. weekday peak hours of adjacent street traffic;
- All mainline freeway monitoring locations where the Project will add 150 or more peak-hour trips, in either direction, during the A.M. or P.M. weekday peak hours.

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Based on these criteria, if no CMP facilities are identified for assessment, no further highway or freeway system analysis needs to be conducted.

## **b. Thresholds of Significance**

Based on Appendix G of the State CEQA Guidelines and the City's TIA Guidelines, the Project would have a significant impact if any of the following were to occur:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Specifically, for purposes of the City's analysis, specific impacts would occur if the Project exceeds the thresholds, as shown in Table IV.L-4 on page IV.L-18.

- Conflict with an applicable congestion management program including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

As evaluated in the Initial Study for the Project, which is included in Appendix A of this Draft EIR, the Project Site is not located within the vicinity of any private or public airport or planning boundary of any airport land use plan. In addition, the Project does not propose any uses that would increase the frequency of air traffic. Furthermore, the Project would not provide permanent lane closures or obstructions that could impede emergency response to or from the Project Site from surrounding streets. The Project would not result in impacts to air traffic patterns and would have a less-than-significant impact related to emergency access. Therefore, no further analysis of these topics is provided.

**Table IV.L-4  
City of Pasadena CEQA Transportation Thresholds of Significance**

<b>Metric</b>	<b>Description</b>	<b>Impact Threshold</b>
1. VMT Per Capita	Vehicle Miles Traveled (VMT) in the City of Pasadena per service population (population + jobs).	CEQA Threshold: An increase over existing Citywide VMT per Capita of 22.6.
2. VT Per Capita	Vehicle Trips (VT) in the City of Pasadena per service population (population + jobs).	CEQA Threshold: An increase over existing Citywide VT per Capita of 2.8.
3. Proximity and Quality of Bicycle Network	Percent of service population (population + jobs) within 0.25 mile of bicycle facility types.	CEQA Threshold: Any decrease in existing Citywide 31.7% of service population (population + jobs) within 0.25 mile of Levels 1 and 2 bike facilities.
4. Proximity and Quality of Transit Network	Percent of service population (population + jobs) within 0.25 mile of transit facility types.	CEQA Threshold: Any decrease in existing Citywide 66.6% of service population (population + jobs) within 0.25 mile of Levels 1 and 2 transit facilities.
5. Pedestrian Accessibility	The Pedestrian Accessibility Score uses the mix of destinations, and a network-based walk shed to evaluate walkability.	CEQA Threshold: Any decrease in the Citywide Pedestrian Accessibility Score, which is currently 3.88.

Source: Pasadena Department of Transportation, 2017.

### c. Project Design Features

The following project design features are proposed with regard to traffic.

**Project Design Feature L-1:** The Project will include a mobility hub under the Main Quad. The hub would include a pick-up/drop-off area, large bike parking area, and a car sharing fleet and provide a central location for transportation options, replacing a multi-entry approach under current conditions.

**Project Design Feature L-2:** The Project will establish a Cycleway to create a campus circulation spine for pedestrians, cyclists, and electric carts to easily access buildings west of the Metro Gold Line.

**Project Design Feature L-3:** The Project will increase the number of shuttles that run between both campuses from two shuttles to six shuttles. The proposed shuttles will run during the same hours of operation as existing (i.e., from approximately 7:00 A.M. to 11:00 P.M., Monday through Friday and from approximately 7:00 A.M. to 4:30 P.M. on weekends) with a frequency of approximately every 20–25 minutes. The service frequency would be increased to every 10–12 minutes, as needed, to continue to meet demand.

## d. Analysis of Project Impacts

**Impact L-1: The Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Specifically, the Project would not exceed the thresholds identified for VMT per Capita and VT per Capita or be below the thresholds identified for Proximity and Quality of Bicycle Network, Proximity and Quality of Transit Network, and Pedestrian Accessibility.**

### (1) Phase I

#### *(a) VMT Per Capita*

The Project's incremental change in VMT per capita is determined by dividing the change in Citywide VMT with and without the Project by the change in Citywide service population without and with the Project.

As shown in Table IV.L-5 on page IV.L-20, the TDF model calculation results show that the Project's incremental change in VMT per capita is 15.2 for Phase I, which does not exceed the City's adopted threshold of significance of 22.6. Therefore, Project impacts to the existing Citywide VMT per capita would be less than significant for Phase I.

#### *(b) VT Per Capita*

The Project's incremental change in VT per capita is determined from dividing the change in Citywide VT with and without the Project by the change in Citywide service population without and with the Project.

As shown in Table IV.L-5, the TDF model calculation results show that the Project's incremental change in VT per capita is 2.5 for Phase I, which does not exceed the City's adopted threshold of 2.8. Therefore, Project impacts to the existing Citywide VT per capita would be less than significant for Phase I.

#### *(c) Proximity and Quality of Bicycle Network*

##### *(i) Hillside Campus*

The TDF model calculation results show that the Project would maintain the service population's accessibility to bicycle facilities for Phase I at the Hillside Campus. Currently,

**Table IV.L-5  
Phase I (Year 2017–Year 2022)**

<b>Transportation Performance Metrics</b>	<b>Significant Impact Threshold</b>	<b>Incremental Change (Existing Plus Project)</b>	<b>Significant Impact?</b>
Project VMT Per Capita	>22.6	15.2	No
Project VT Per Capita	>2.8	2.5	No
<b>Hillside Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	31.7%	No
Proximity and Quality of Transit Network	<66.6%	66.7%	No
Pedestrian Accessibility	<3.88	3.88	No
<b>South Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	31.9%	No
Proximity and Quality of Transit Network	<66.6%	66.8%	No
Pedestrian Accessibility	<3.88	3.89	No
<i>Source: Pasadena Department of Transportation, 2017.</i>			

31.7 percent of the City's existing service population is located within 0.25 mile of Levels 1 and 2 bicycle facilities. As shown in Table IV.L-5, with the implementation of Phase I of the Project at the Hillside Campus, the Citywide service population with accessibility to bicycle facilities would be 31.7 percent, a change of 0 percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such bicycle facilities, impacts would be less than significant for Phase I at the Hillside Campus.

*(ii) South Campus*

The TDF model calculation results show that the Project would increase the service population's accessibility to bicycle facilities for Phase I at the South Campus. As previously described, 31.7 percent of the City's existing service population is currently located within 0.25 mile of Levels 1 and 2 bicycle facilities. As shown in Table IV.L-5, with the implementation of Phase I of the Project at the South Campus, the Citywide service population with accessibility to bicycle facilities would be 31.9 percent, an increase of 0.2 percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such bicycle facilities, impacts would be less than significant for Phase I at the South Campus.

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(d) *Proximity and Quality of Transit Network*

(i) *Hillside Campus*

The TDF model calculation results show that the Project would increase the service population's accessibility to transit facilities for Phase I at the Hillside Campus. Currently, 66.6 percent of the City's existing service population is located within 0.25 mile of Levels 1 and 2 facilities. As shown in Table IV.L-5 on page IV.L-20, with the implementation of Phase I of the Project at the Hillside Campus, the Citywide service population with accessibility to transit facilities would be 66.7 percent, an increase of 0.1 percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such transit facilities, impacts would be less than significant for Phase I at the Hillside Campus.

(ii) *South Campus*

The TDF model calculation results show that the Project would increase the service population's accessibility to transit facilities for Phase I at the Hillside Campus. As previously described, 66.6 percent of the City's existing service population is currently located within 0.25 mile of Levels 1 and 2 facilities. As shown in Table IV.L-5, with the implementation of Phase I of the Project at the South Campus, the Citywide service population with accessibility to transit facilities would be 66.8 percent, an increase of 0.2 percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such transit facilities, impacts would be less than significant for Phase I at the South Campus.

(e) *Pedestrian Accessibility*

(i) *Hillside Campus*

The TDF model calculation results show that the Project would increase the pedestrian accessibility score for Phase I at the Hillside Campus. Currently, the Citywide pedestrian accessibility score is 3.88. As shown in Table IV.L-5, with the implementation of Phase I of the Project at the Hillside Campus, the Citywide pedestrian accessibility score would be 3.88, which represents no change in pedestrian accessibility score. As the Project would not reduce the Citywide score, impacts would be less than significant for Phase I at the Hillside Campus.

(ii) *South Campus*

The TDF model calculation results show that the Project would increase the pedestrian accessibility score for Phase I at the South Campus. As previously described, the current Citywide pedestrian accessibility score is 3.88. As shown in Table IV.L-5, with

the implementation of Phase I of the Project at the South Campus, the Citywide pedestrian accessibility score would be 3.89, an increase of 0.01. As the Project would not reduce the Citywide score, impacts would be less than significant for Phase I at the South Campus.

## (2) Phase I plus Phase II (Buildout)

### *(a) VMT Per Capita*

As shown in Table IV.L-6 on page IV.L-23, the TDF model calculation results show that the Project's incremental change in VMT per capita is 14.6 at Project buildout, which does not exceed the City's adopted threshold of significance of 22.6. Therefore, Project impacts to the existing Citywide VMT per capita would be less than significant at Project buildout.

### *(b) VT Per Capita*

As shown in Table IV.L-6, the TDF model calculation results show that the Project's incremental change in VT per capita is 2.3 at Project buildout, which does not exceed the City's adopted threshold of 2.8. Therefore, Project impacts to the existing Citywide VT per capita would be less than significant at Project buildout.

### *(c) Proximity and Quality of Bicycle Network*

#### *(i) Hillside Campus*

The TDF model calculation results show that the Project would maintain the service population's accessibility to bicycle facilities for Project buildout at the Hillside Campus. Currently, 31.7 percent of the City's existing service population is located within 0.25 mile of Level 1 and 2 bicycle facilities. As shown in Table IV.L-6, with Project buildout at the Hillside Campus, the Citywide service population with accessibility to bicycle facilities would be 31.7 percent, a change of zero percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such bicycle facilities, impacts would be less than significant at Project buildout.

#### *(ii) South Campus*

The TDF model calculation results show that the Project would increase the service population's accessibility to bicycle facilities for Project buildout at the South Campus. As previously described, 31.7 percent of the City's existing service population is currently located within 0.25 mile of Level 1 and 2 bicycle facilities. As shown in Table IV.L-6, with Project buildout at the South Campus, the Citywide service population with accessibility to bicycle facilities would be 32.0 percent, an increase of 0.3 percent. As the Project would

**Table IV.L-6  
Phase I plus Phase II (Project Buildout 2032)**

<b>Transportation Performance Metrics</b>	<b>Significant Impact Threshold</b>	<b>Incremental Change (Existing Plus Project)</b>	<b>Significant Impact?</b>
Project VMT Per Capita	>22.6	14.6	No
Project VT Per Capita	>2.8	2.3	No
<b>Hillside Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	31.7%	No
Proximity and Quality of Transit Network	<66.6%	66.6%	No
Pedestrian Accessibility	<3.88	3.88	No
<b>South Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	32.0%	No
Proximity and Quality of Transit Network	<66.6%	66.8%	No
Pedestrian Accessibility	<3.88	3.88	No
<hr/> <i>Source: Pasadena Department of Transportation, 2017.</i>			

not reduce the percentage of the City's existing service population located within 0.25 mile of such bicycle facilities, impacts would be less than significant at Project buildout.

*(d) Proximity and Quality of Transit Network*

*(i) Hillside Campus*

The TDF model calculation results show that the Project would reduce the service population's accessibility to transit facilities for Project buildout at the Hillside Campus. Currently, 66.6 percent of the City's existing service population is located within 0.25 mile of Level 1 and 2 facilities. As shown in Table IV.L-6, with Project buildout at the Hillside Campus, the Citywide service population with accessibility to transit facilities would be 66.6 percent, a change of zero percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such transit facilities, impacts would be less than significant at Project Buildout.

*(ii) South Campus*

The TDF model calculation results show that the Project would increase the service population's accessibility to transit facilities for Project buildout at the Hillside Campus. As previously described, 66.6 percent of the City's existing service population is currently located within 0.25 mile of Level 1 and 2 facilities. As shown in Table IV.L-6, with Project buildout at the South Campus, the Citywide service population with accessibility to transit

facilities would be 66.8 percent, an increase of 0.2 percent. As the Project would not reduce the percentage of the City's existing service population located within 0.25 mile of such transit facilities, impacts would be less than significant at Project buildout.

*(e) Pedestrian Accessibility*

*(i) Hillside Campus*

The TDF model calculation results show that the Project would increase the pedestrian accessibility score for Project buildout at the Hillside Campus. Currently, the Citywide pedestrian accessibility score is 3.88. As shown in Table IV.L-6 on page IV.L-23, with Project buildout at the Hillside Campus, the Citywide pedestrian accessibility score would be 3.88, which represents no change in pedestrian accessibility score. As the Project would not reduce the Citywide score, impacts would be less than significant at Project buildout.

*(ii) South Campus*

The TDF model calculation results show that the Project would increase the pedestrian accessibility score for Phase I at the South Campus. As previously described, the current Citywide pedestrian accessibility score is 3.88. As shown in Table IV.L-6, with Project buildout at the South Campus, the Citywide pedestrian accessibility score would be 3.88, which represents no change in pedestrian accessibility score. As the Project would not reduce the Citywide score, impacts would be less than significant at Project buildout.

**Impact L-2: The Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.**

The arterial monitoring station locations in Pasadena include Arroyo Parkway at California Boulevard (CMP ID 119), Pasadena Avenue/St. John Avenue at California Boulevard (CMP ID 120), and Rosemead Boulevard at Foothill Boulevard (CMP ID 121). As shown in Table IV.L-7 on page IV.L-25, for both Phase I and Project buildout, impacts would be less than significant at the CMP arterial monitoring station locations.

The mainline freeway monitoring locations in Pasadena include SR-110 at Pasadena Avenue (CMP Station 1050), SR-134 west of San Rafael Avenue (CMP Station 1056), I-210 west of SR-134 and I-710 (CMP Station 1060), and I-210 at Rosemead Boulevard (CMP Station 1061). Based on the trip distribution assumed in the Traffic Study, the Project would not add 150 or more trips onto the mainline freeway monitoring locations during either the A.M. or P.M. weekday peak hours. Therefore, impacts would be less than

**Table IV.L-7  
Congestion Management Plan Traffic Impact Analysis—Intersection Capacity Utilization (ICU)  
Analysis**

CMP Arterial Monitoring Intersection Locations	A.M. Peak- Hour Intersection Volume (Project Only)	P.M. Peak- Hour Intersection Volume (Project Only)	Existing plus Project ICU Level of Service		Significant?	
			A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak
<b>Phase I (Year 2017–Year 2022)</b>						
<b>CMP ID 119</b>						
Arroyo Parkway at California Boulevard	60	56	0.608/B	0.738/C	No	No
<b>CMP ID 120</b>						
Pasadena Avenue at California Boulevard	52	41	0.808/D	0.877/D	No	No
St. John Avenue at California Boulevard	43	27	0.565/A	0.606/B	No	No
<b>Phase I plus Phase II (Project Buildout Year 2032)</b>						
<b>CMP ID 119</b>						
Arroyo Parkway at California Boulevard	78	74	0.613/B	0.742/C	No	No
<b>CMP ID 120</b>						
Pasadena Avenue at California Boulevard	64	56	0.811/D	0.879/D	No	No
St. John Avenue at California Boulevard	50	38	0.569/A	0.606/B	No	No
<i>Source: Pasadena Department of Transportation, 2017.</i>						

significant, and no further CMP analysis of the mainline freeway monitoring locations is required.

In addition, CMP transit analysis requires Project trip-generation estimates, which are shown in Table IV.L-8 on page IV.L-26.<sup>7</sup> For Phase I, there would be an estimated increase in transit trip ridership of 1,905 daily transit trips, 192 A.M. peak-hour transit trips, and 171 P.M. peak-hour transit trips are estimated in Phase I. For Project buildout, there would be an estimate increase in transit trip ridership of 2,312 daily transit trips, 226 A.M.

<sup>7</sup> The calculations are based on total Project vehicle trips with no trip credit given from internal trip capture, walk-in, pass-by trips, or transit trip credit.

**Table IV.L-8  
Congestion Management Plan Transit Impact Analysis—Transit Trip Calculation**

Phase	Daily	A.M. Peak Hour	P.M. Peak Hour
<b>Phase I (Year 2017–Year 2022)</b>			
Total Project Vehicle Trips	9,070	912	813
Total Person Trips <sup>a</sup>	12,698	1,277	1,138
Percent CMP Transit Factor <sup>b</sup>	15%	15%	15%
Total Transit Trips	1,905	192	171
<b>Phase I plus Phase II (Project Buildout Year 2032)</b>			
Total Project Vehicle Trips	11,009	1,074	989
Total Person Trips <sup>a</sup>	15,413	1,504	1,385
Percent CMP Transit Factor <sup>b</sup>	15%	15%	15%
Total Transit Trips	2,312	226	208
<sup>a</sup> Average vehicle ridership of 1.4 based on the 2010 Congestion Management Program for Los Angeles County Appendix D.8.4. <sup>a</sup> Primarily commercial within 0.25 mile of a CMP transit center (Gold Line Fillmore Station) based on the 2010 Congestion Management Program for Los Angeles County Appendix D.8.4. Source: Pasadena Department of Transportation, 2017.			

peak-hour transit trips, and 208 P.M. peak-hour transit trips are estimated at Project buildout.

Furthermore, the CMP requires a summary of existing transit service in the Traffic Study area. As presented in Table IV.L-9 on page IV.L-27, the Project would have available 14 transit stops, the Metro Gold Line, seven bus lines nearby, and the Project's own shuttle service. Therefore, there would be adequate transit capacity to serve the Project.

**Impact L-3: The Project would potentially increase hazards due to a design feature, specifically the proposed digital gallery, or incompatible uses. Implementation of a mitigation measure would reduce potential impacts to less than significant levels.**

As discussed in Section III, Project Description, of this Draft EIR, the Project proposes reconstruction and expansion of the South Building at the Hillside Campus to house administrative and transportation-related services, such as offices and break rooms for shuttle drivers, and allow storage areas currently located in the Ellwood Building to be relocated to this facility and create additional space available in the Ellwood Building for academic and other administrative uses. With the development of the proposed

**Table IV.L-9  
CMP Transit Impact Analysis**

Service Route	Seats per Car	Service Frequency		Seat Capacity per Route		Available % Seat Capacity		Available Seat Capacity	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
ACCD Shuttle <sup>a</sup>	20	4	4	80	80	0.00	0.00	0	0
PT 20 <sup>b</sup>	18	6	4	108	72	0.00	0.43	0	31
PT 51/52 <sup>b</sup>	16	3	3	48	48	0.25	0.44	12	21
Metro 260 <sup>c</sup>	40	6	8	240	320	0.63	0.05	151	16
Metro 686 <sup>c</sup>	40	2	2	80	80	0.80	0.68	64	54
Metro 687 <sup>c</sup>	40	2	2	80	80	0.80	0.68	64	54
Metro 762 <sup>c</sup>	40	5	4	200	160	0.69	0.00	138	0
Metro Gold Line <sup>d</sup>	72	16	16	1,152	1,152	0.05	0.05	58	58
<b>Total</b>	<b>286</b>	<b>44</b>	<b>43</b>	<b>1,988</b>	<b>1,992</b>	<b>—</b>	<b>—</b>	<b>487</b>	<b>234</b>
<b>Phase I Project Transit Trips</b>								<b>192</b>	<b>171</b>
<b>Surplus (Deficit)</b>								<b>295</b>	<b>63</b>
<b>Buildout Project Transit Trips</b>								<b>226</b>	<b>208</b>
<b>Surplus (Deficit)</b>								<b>261</b>	<b>26</b>

<sup>a</sup> Assumed no seats available during peak hours.

<sup>b</sup> Available seat capacity based on April 2016 data.

<sup>c</sup> Available seat capacity estimated based on April 2016 data received from Metro. Conservative bi-directional available seat capacity applied per route.

<sup>d</sup> Approximate seat capacity for a 2-car train at 36 seats per car. Assumed 5 percent available seating capacity during peak hours.

Source: Pasadena Department of Transportation, 2017.

Commuter Services and Facilities Hub, the South Building would serve as a shuttle service/drop-off/turn-around point. In addition, the Project includes changes to the circulation system, including campus parking and access. These improvements at the Hillside Campus are not expected to pose any hazards due to a design feature or incompatible uses.

The Project proposes a new mobility hub and a Cycleway at the South Campus to improve and facilitate vehicular and non-vehicular circulation. In addition, development at the South Campus would involve the construction of a temporary pedestrian bridge and a large quad area over the Metro Gold Line and an underground tunnel beneath the Metro Gold Line to facilitate both pedestrian and vehicular circulation throughout the South Campus. Construction of the temporary pedestrian bridge, the Main Quad, and the tunnel would be required to comply with Metro requirements and other applicable building standards and codes to ensure that these structures that facilitate Project circulation would not affect the operation of the Metro Gold Line. As a Responsible Agency, Metro will review the Project's structural designs, construction methods, and operational features and impose certain requirements, including, but not limited to, vertical clearance, setbacks, structural support, hours of construction, etc.

In accordance with the City's TIA Guidelines, the changes proposed by the Project would be addressed in detail prior to the Project's approval and funded prior to construction. Thus, the Project would ensure that transportation system and circulation improvements needed to support the Project and maintain the community's quality of life will be incorporated into the Project design. As previously discussed, the Project, including the implementation of Project Design Features L-1 through L-3 above, has been reviewed and analyzed by the Pasadena DOT for its mobility performance measures regarding the quality of walking, biking, transit, and vehicular travel in the City. Therefore, the Project would not substantially increase hazards due to Project design configuration, and impacts would be less than significant.

However, the Project would also include a digital gallery that displays images representing a wide array of artwork and conceptual designs associated with ArtCenter on the façade of the 1111 Building. As set forth in Project Design Feature A-10, in Section IV.A, Aesthetics, of this Draft EIR, the proposed 8,000-square-foot digital gallery would display a combination of colors, still images, animations, and videos, with a change-rate of no less than six seconds. It would be located anywhere between the southeastern corner of the building and the northeastern corner of the building, potentially "wrapping" either corner. If the digital gallery were located at the southeastern corner of the building, at the Glenarm Street, SR-110/Arroyo Parkway intersection, it could potentially be located behind the traffic signals, thereby conflicting with PMC Section 12.15.050, as described above, creating confusion, which may lead to hazardous driving conditions. As such, without

mitigation, impacts related to hazards due to a design feature would be considered significant.

**Impact L-4: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

As discussed above, the City's TIA Guidelines promote an integrated and multimodal transportation system within the City through public transit services, parking strategies, bicycle facilities, and pedestrian components that are connected with the larger transportation system. The TIA Guidelines ensure that transportation systems are improved to support not only new development but also the quality of life within the community. The TIA Guidelines performance measures are aligned with the City's sustainability goals and assess efficiency through analysis of per capita length and number of trips. The Project would incorporate Project Design Features L-1 through L-3 and be designed to: (1) encourage walking, biking, and transit use; (2) ensure accessibility and provide a compatible transition to adjoining neighborhoods; and (3) create multimodal features and pedestrian/bicycle facilities that encourage other alternatives to motor vehicles. As a result, the Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. Furthermore, the Project would not decrease the performance or safety of such facilities. Therefore, impacts related to alternative transportation modes would be less than significant.

## **4. Cumulative Impacts**

### **a. Transportation Performance Metrics**

Cumulative transportation impacts within the City were recently evaluated in the 2015 Pasadena General Plan EIR. In evaluating the potential cumulative transportation impacts associated with the Project, the City's transportation demand model was run assuming the addition of the Project. The results of the analysis found that the transportation characteristics for the 2035 cumulative with Project scenario would not exceed the significance thresholds, as shown in Table IV.L-10 on page IV.L-30. As such, cumulative impacts associated with all transportation modes would be less than significant.

### **b. Congestion Management Plan Screening Analysis**

The 2015 Pasadena General Plan EIR determined that the buildout of the General Plan in 2035 would result in significant and unavoidable impacts to two CMP freeway segments and one arterial intersection. The impacted CMP freeway segments are I-210, at post mile R23.55, west of SR-134/I-710 and I-210, at post mile R29.72, west of

**Table IV.L-10  
Phase I Plus Phase II (General Plan Buildout 2035)**

<b>Transportation Performance Metrics</b>	<b>Significant Impact Threshold</b>	<b>Incremental Change (Existing Plus Project)</b>	<b>Significant Impact?</b>
Project VMT Per Capita	>22.6	22.1	No
Project VT Per Capita	>2.8	2.4	No
<b>Hillside Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	70.0%	No
Proximity and Quality of Transit Network	<66.6%	72.4%	No
Pedestrian Accessibility	<3.88	5.08	No
<b>South Campus</b>			
Proximity and Quality of Bicycle Network	<31.7%	70.1%	No
Proximity and Quality of Transit Network	<66.6%	72.7%	No
Pedestrian Accessibility	<3.88	5.09	No
<i>Source: Pasadena Department of Transportation, 2017.</i>			

Rosemead Boulevard. The impacted CMP arterial intersection is Pasadena Avenue and California Boulevard (CMP ID #120) in the A.M. peak hour. The 2015 Pasadena General Plan Final EIR identified no feasible mitigation measures available to reduce impacts to CMP freeway segments and arterial intersections to below a level of significance; therefore, the City adopted a Statement of Overriding Consideration as part of the General Plan Update. As identified in the discussion of Impact L-2, the Project would not add 150 or more trips onto the mainline freeway monitoring locations during either the A.M. or P.M. weekday peak hours. Therefore, the Project's contribution to the impacts of General Plan buildout on freeway mainline segments would not be cumulatively considerable.

As shown in Table IV.L-7 on page IV.L-25, at buildout, the Project would contribute 64 trips during the A.M. peak hour and 56 trips during the P.M. peak hour to the intersection of Pasadena Avenue and California Boulevard, only slightly above the CMP's threshold for study of 50 peak-hour trips. As shown in Table IV.L-11 on page IV.L-31, at buildout of the City's General Plan, this intersection is anticipated to operate at LOS F during the A.M. peak hour, with a volume-to-capacity (V/C) ratio of 1.011; and an LOS E during the P.M. peak hour, with a V/C ratio of 0.946.

However, the Project would not increase the V/C ratio of the Pasadena Avenue/California Boulevard intersection by more than 2 percent. Therefore, the Project's contribution to the impacts of the General Plan buildout on CMP arterials would not be cumulatively considerable.

**Table IV.L-11  
Congestion Management Plan Traffic Impact Analysis—Intersection Capacity Utilization (ICU)  
Analysis (General Plan Buildout—2035)**

CMP Arterial Monitoring Intersection Locations	A.M. Peak-Hour Intersection Volume (Project Only)	P.M. Peak-Hour Intersection Volume (Project Only)	2035 No Project ICU LOS		2035 + Project ICU LOS		Significant?	
			A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak
<b>CMP ID 119</b>								
Arroyo Parkway at California Blvd.	78	74	0.832/D	0.872/D	0.850/D	0.887/D	No	No
<b>CMP ID 120</b>								
Pasadena Ave. at California Blvd.	64	56	1.013/F	0.981/E	1.013/F	0.993/E	No	No
Saint John Ave. at California Blvd.	50	38	0.870/D	0.788/C	0.892/D	0.788/C	No	No
<i>Source: Pasadena Department of Transportation, 2017.</i>								

Based on the above, the Project's contribution to cumulative impacts related to traffic would not be cumulatively considerable. As such, the Project's cumulative impacts related to traffic would be less than significant.

## 5. Mitigation Measures

The mitigation measure identified below is included to ensure that the potential impact related to the operation of the digital gallery on the eastern façade of the 1111 Building is reduced to a less-than-significant level:

**Mitigation Measure L-1:** In order to ensure the digital gallery does not create confusion with traffic signals at the intersection of Glenarm Street and SR-110/Arroyo Parkway, the digital gallery shall be located no less than 50 feet north from the southeastern corner of the building or the lowest extent of the digital gallery shall be no less than 25 feet above the ground. The digital gallery shall be further reviewed by the Pasadena Department of Transportation (DOT) and other relevant agencies.

## 6. Level of Significance After Mitigation

Modification of the proposed digital gallery to modify its location, along with review by the Pasadena DOT and other relevant agencies, will ensure the proposed digital gallery is not a hazard to motorists traveling near the South Campus. With implementation of

Mitigation Measure L-1 above, Project-level and cumulative impacts related to traffic and traffic hazards would be less than significant.