PASADENA DEPARTMENT OF TRANSPORTATION

MOVING PEOPLE TO PLACES, CONNECTIVITY

Transportation Impact Analysis

CEQA Evaluation

Project Address: 491-577 South Arroyo Parkway

Project Summary: Demolition of approximately 46,000 sf commercial. Construction of 151,000 sf residential building with up to 197 units, 3,000 sf commercial, 184,376 sf senior living facility consisting of up to 95 independent living units and 85,800 sf assisted living. 5,882 sf restaurant to remain

Applicant:
The Arroyo Parkway, LLC
716 Mission Street
South Pasadena, CA 91030

Attention:
Luis Rocha, Zoning Administrator
City Planning Department

June 17, 2021

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I. Study Objective

This report analyzed the impact the development will have on the City transportation system by estimating incremental changes in vehicle miles traveled (VMT) per capita, vehicle trips per capita (VT), the project impact on service population proximity access to transit and bike facilities, and walk accessibility score.

II. Project Description

The City of Pasadena Department of Transportation reviewed the application of a Planned Development and a variance for preserving two existing historic resources for a project involving the demolition of approximately 46,000 sf commercial and the construction of a 151,000 sf residential building with up to 197 units, 3,000 sf commercial, 184,376 sf senior living facility with 95 independent living units, 85,800 sf assisted living, 5,882 sf restaurant, and subterranean parking.

Figure 1 depicts the project's site plan. Two driveways are located along Arroyo Parkway, and one driveway is located along California Boulevard.

III. Existing Transportation Network

Street System Classifications

Raymond Avenue is a north/south **Neighborhood Connector** between Corson Street to Del Mar Boulevard, and a **City Connector** between Del Mar Boulevard to Glenarm Street. Raymond Avenue does not have bike lanes south of Maple Street. It has a speed limit of 35 mph between California Boulevard and Glenarm Street, and 30 mph between California Boulevard and Green Street.

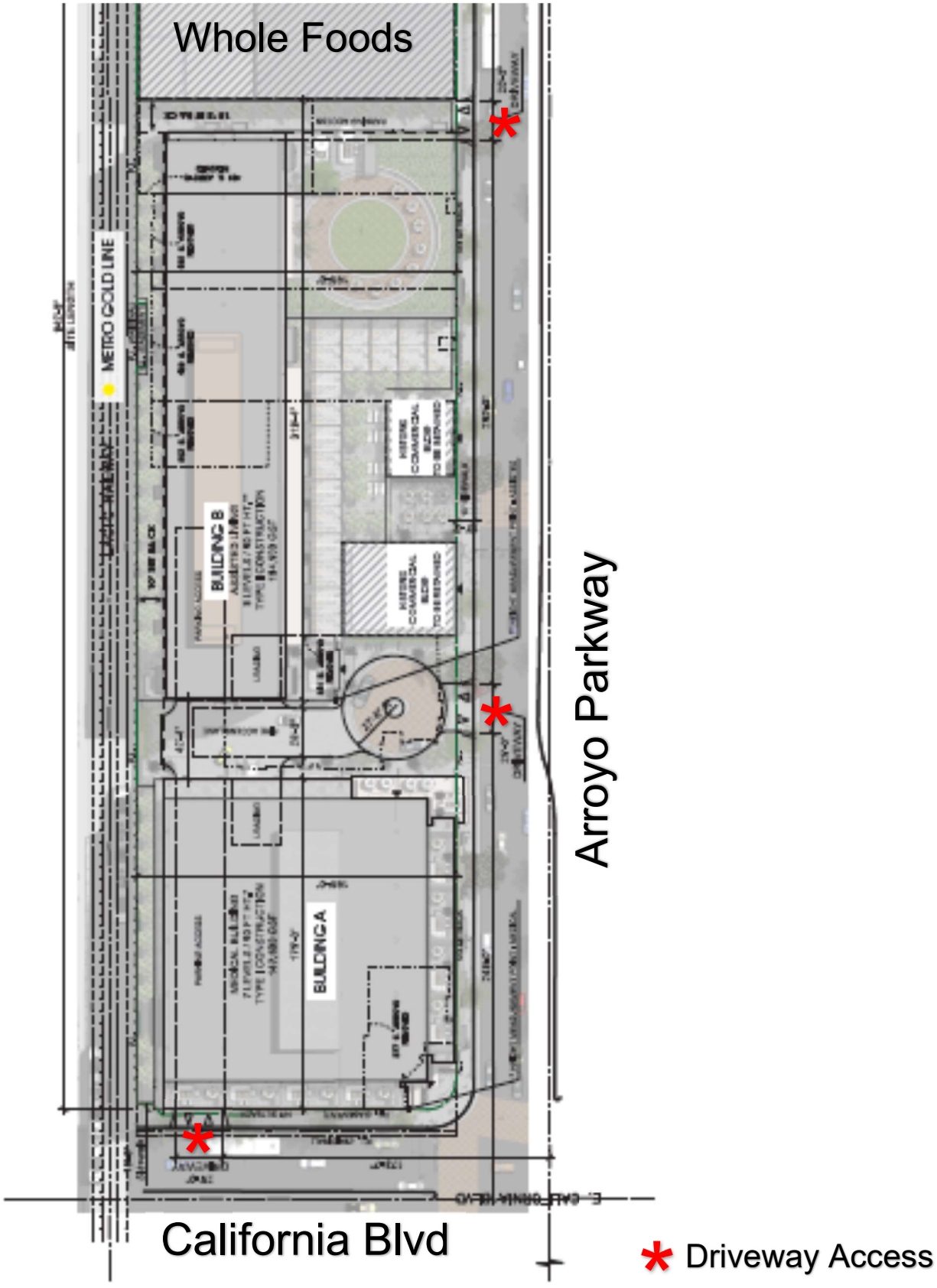
Arroyo Parkway is a north/south **Access Road** between Holly Street to Colorado Boulevard, and a **City Connector** between Colorado Boulevard to the SR-110 freeway. In the vicinity of the project, Arroyo Parkway is a four-lane divided roadway with time limited parking on both sides of the roadway. It has a 35 mph speed limit in the project vicinity. Arroyo Parkway is not designated as a bike lane or route.

Marengo Avenue is a north/south **City Connector** between Orange Grove Boulevard and Del Mar Boulevard, and a **Neighborhood Connector** north of Orange Grove Boulevard to the northern City limits and south of Del Mar Boulevard to the southern City limits. Bike lanes are present south of Cordova Street to Glenarm Street.

Cordova Street is a four-lane, east/west **Neighborhood Connector** with two lanes in each direction. The posted speed limit on Cordova Street is 35 mph. A future road diet is proposed along a section of this roadway, which will include bike lanes.

Del Mar Boulevard is an east/west **City Connector** that generally offers two lanes in each direction. The speed limit is 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.

Figure 1. Project Site Plan



Bellevue Drive is an east/west Access Road between Arroyo Parkway and Marengo Avenue with parking on both sides of the street. The Arroyo Parkway at Bellevue Drive intersection is a signalized offset intersection.

California Boulevard is an east/west **City Connector** posted with a 30 mph speed limit. 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.

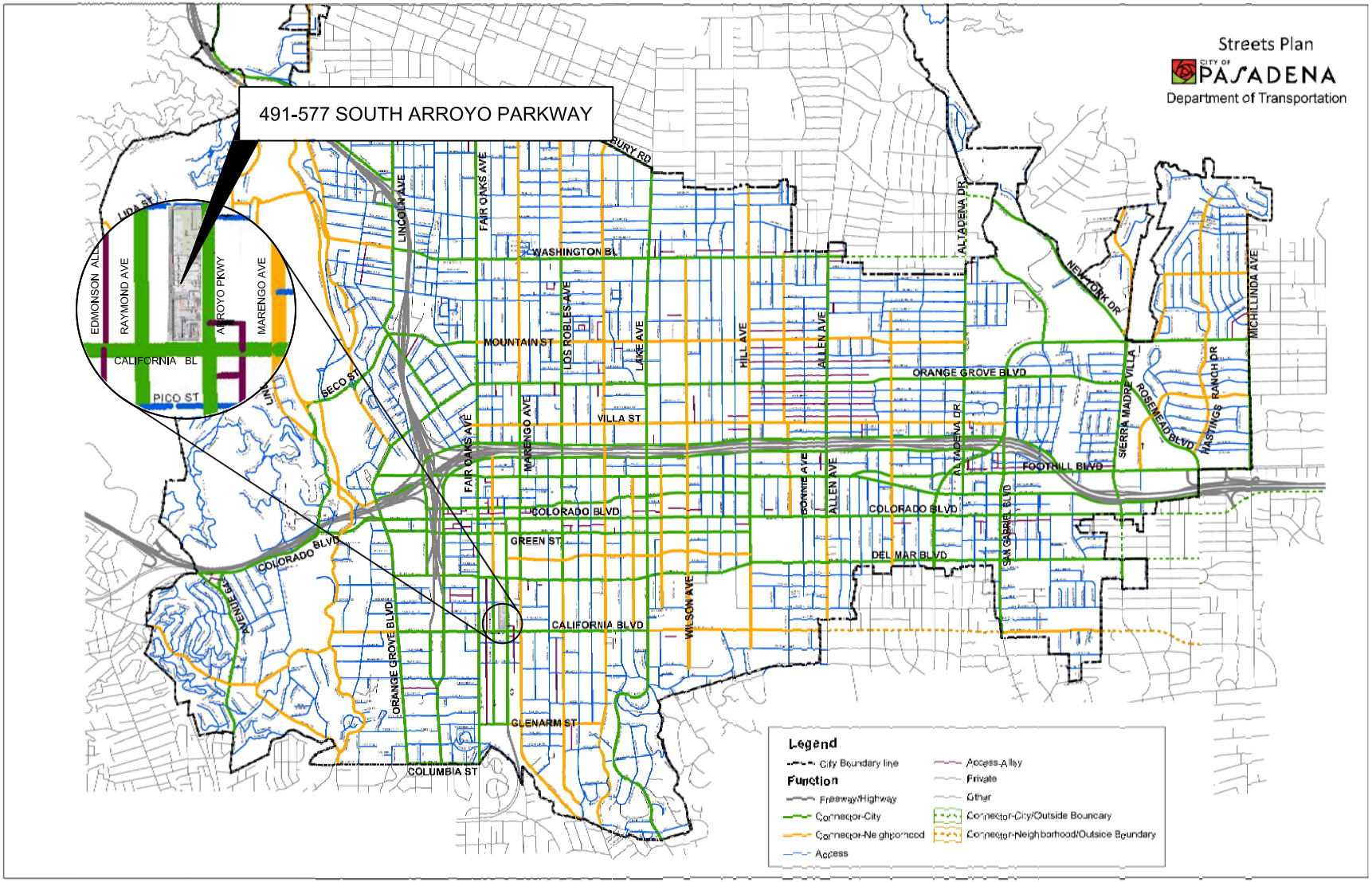
Glenarm Street is an east/west oriented roadway that is classified as an **Access Road** between Pasadena Avenue to Fair Oaks Avenue, a **City Connector** between Fair Oaks Avenue to Arroyo Parkway, and a **Neighborhood Connector** between Arroyo Parkway to El Molino Avenue. Glenarm Street is designated as a Class III Bike Route between Pasadena Avenue and Marengo Avenue, and a Class II Bike Lane east of Marengo Avenue.

Figure 2 depicts the project in the City of Pasadena's Adopted Street Types map.

Existing Transit Service

Public transit service within the project study area is currently provided by LA Metro and Pasadena Transit (PT). The transit stops near the project are summarized:

Location	**Route**
Raymond Ave at Del Mar Blvd – East side	PT 20,51,52; Metro 177,256,501,686,687,Gold Line
Raymond Ave at California Blvd – Northeast corner	PT 51,52; Metro 686,687
Raymond Ave at Fillmore St – East side	Metro Gold Line
Raymond Ave at Fillmore St – Northeast corner	PT 51,52; Metro 686, 687
Raymond Ave at Glenarm St – Northeast corner	PT 51, 52; Metro 686, 687
Arroyo Parkway at Del Mar Blvd – West side	Metro Gold Line
Arroyo Parkway at Del Mar Blvd – Southwest corner	Metro 256
Arroyo Parkway at Bellevue Dr – Southwest corner	Metro 256
Arroyo Parkway at California Blvd – Northside on California Blvd	Metro 256
Arroyo Parkway at California Blvd – Southwest corner – Southeast corner	PT 20
Arroyo Parkway at Fillmore St – Northeast corner – Southwest corner	PT 20



NO SCALE

PASADENA
DEPARTMENT OF TRANSPORTATION

FIGURE 2
CITY OF PASADENA ADOPTED STREET TYPES
491-577 SOUTH ARROYO PARKWAY

Arroyo Parkway at Fillmore St – West side at cul-de-sac	Metro Gold Line
Arroyo Parkway at Glenarm St – East side – Northwest side	PT 20
Marengo Ave at California Blvd – Southeast corner	PT 20

IV. Transportation Analysis Methodology

With the City of Pasadena General Plan, the City's guiding principles cumulatively represent the community's vision for the future:

- Growth will be targeted to serve community needs and enhance quality of life.
- New construction that could affect the integrity of historic resources will be compatible with, and differentiated from, the existing historic resource.
- Economic vitality will be promoted to provide jobs, services, revenues, and opportunities.
- Pasadena will be a socially, economically, and environmentally sustainable community.
- Pasadena will be a city where people can circulate without cars.
- Pasadena will be promoted as a cultural, scientific, corporate, entertainment, and educational center for the region.
- Community participation will be a permanent part of achieving a greater city.
- Pasadena is committed to public education and a diverse educational system responsive to the broad needs of the community.

Understanding the goals and objectives of the General Plan, the Pasadena Department of Transportation sets forth goals and policies to improve overall transportation in Pasadena and create "a community where people can circulate without cars." Inherent in this vision statement is to accommodate different modes of transportation including vehicle, pedestrian, bicycle, and transit. This report will assess accessibility of these different modes of travel and the project's transportation impacts using the City's adopted transportation performance measures.

Analysis Purpose

Pasadena reviews several types and sizes of projects that could be subject to environmental review under the California Environmental Quality Act (CEQA). Transportation impact analyses are an integral part of the environmental review process that is required for all proposed projects not categorically exempt under CEQA.

Analysis Cap Criteria - Transportation Performance Measures

The Pasadena Department of Transportation adopted a set of performance measures and CEQA thresholds that are closely aligned with the Mobility Element objectives and policies. Pasadena Department of Transportation's 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. They are:

- Vehicle Miles Traveled per Capita
- Vehicle Trips per Capita
- Proximity and Quality of the Bicycle Network
- Proximity and Quality of the Transit Network
- 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 proposed performance measures will assist in determining how to balance travel modes as well as understand the mobility needs of the community.

Definitions

VMT Per Capita

The Vehicle Miles Traveled (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% of the mileage of trips that begin and end inside Pasadena and 50% of the distance travelled 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 VMT itself will 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.

VT Per Capita

Vehicle Trips (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 of Pasadena, 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 of Pasadena boundaries, and 50% 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, VT itself will 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.

Proximity and Quality of Bicycle Network

The Proximity and Quality of Bicycle Network provides a measure of the percent of the City's service population (population + jobs) within a quarter mile of bicycle facility types. The facility types are aggregated into three hierarchy levels, obtained from the City's (Draft) Bicycle Transportation Plan categories as shown in the following table:

Table 1. Bicycle Facilities Hierarchy

LEVEL	DESCRIPTION	FACILITIES INCLUDED
1	Advanced Facilities	Bike Paths Multipurpose Paths Cycle Tracks/Protected Bike Lanes
2	Dedicated Facilities	Buffered Bike Lanes Bike Lanes Bike Boulevards
3	Basic Facilities	Bike Routes Enhanced Bike Routes Emphasized Bikeways

For each bike facility level, a quarter-mile network distance buffer is calculated and the total service population (population + jobs) within the buffer is identified.

The City can improve measures of Bike Facility Access by improving and expanding existing bike facilities and by encouraging residential and commercial development in areas with high-quality bike facilities.

Proximity and Quality of Transit Network

The Proximity and Quality of Transit Network provides a measure of the percent of the City's service population (population + jobs) within a quarter mile of each of each of three transit facility types, as defined in the following table:

Table 2. Description of Transit Facilities

TRANSIT FACILITIES HIERARCHY	
LEVEL	FACILITIES INCLUDED
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 six and 15 minutes in peak periods.
3	Includes corridors with transit headways of 16 minutes or more at peak periods.

For each facility level, a quarter-mile network distance buffer is calculated and the total service population (population + jobs) within the buffer is identified. 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 occur in areas with an already high-quality transit service.

Pedestrian Accessibility Score

Proximity and Quality of Pedestrian Environment score provides a measure of the average walkability in the TAZ surrounding Pasadena residents, based on a Pedestrian Accessibility metric. The Pedestrian proximity metric is a simple 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)
- College

The following table summarizes the City's Metrics for determining CEQA Caps:

Table 3. City of Pasadena CEQA Thresholds of Significance

METRIC	DESCRIPTION	IMPACT THRESHOLD
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 a quarter mile of bicycle facility types	CEQA Threshold: Any decrease in existing citywide 31.7% of service population (population + jobs) within a quarter mile of Level 1 & 2 bike facilities.
4. Proximity and Quality of Transit Network	Percent of service population (population + jobs) located within a quarter mile of transit facility types.	CEQA Threshold: Any decrease in existing citywide 66.6% of service population (population +

			jobs) within a quarter mile of Level 1 & 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

V. Project Transportation Impact Analysis

Project analyses are based on the City's Transportation Impact Analysis Guidelines. Proposed projects are analyzed using the City's calibrated travel demand forecasting model (TDF) built on SCAG's regional model.

The City's TDF model uses TransCAD software to simulate traffic levels and travel patterns for the City of Pasadena. 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.

Projects with proposed land uses that are consistent with the General Plan and complimentary to their surrounding land uses are expected to reduce the trip length associated with adjacent land uses; and/or increase the service population access to pedestrians, bike, and transit facilities if the project is within a quarter mile of those facilities.

Table 4 summarizes the following analyses of the proposed project's impacts on the transportation system using the calibrated TDF model. The results are based on the project's vehicular and non-vehicular trip making characteristics, trip length, and its interaction with other surrounding/citywide land uses, and the City's transportation network.

Table 4. Transportation Performance Metrics Summary

Transportation Performance Metrics	Significant Impact Cap (existing)	Incremental change (existing + project)	Significant Impact?
VMT per Capita	>22.6	8.2	No
VT per Capita	>2.8	1.4	No
Proximity and Quality of Bicycle Network	<31.7%	32.0	No
Proximity and Quality of Transit Network	<66.6%	66.8	No
Pedestrian Accessibility	<3.9	3.9	No

The TDF model calculation results indicate that the project does not exceed any of the adopted CEQA thresholds of significance.

VI. Conclusion

The City of Pasadena Department of Transportation reviewed the application of a Planned Development and a variance for preserving two existing historic resources for a project involving the demolition of approximately 46,000 sf commercial and the construction of a 151,000 sf residential building with up to 197 units, 3,000 sf commercial, 184,376 sf senior living facility with 95 independent living units, 85,800 sf assisted living, 5,882 sf restaurant, and subterranean parking.

Using the City's 2013 Transportation Demand Model, DOT found that the proposed project did not exceed any of the CEQA transportation impact threshold metrics outlined in the City's guidelines.

VII. Appendices

Memorandum of Understanding
City's Travel Demand Forecasting Model Output/Results

Appendix:
Memorandum of Understanding

Viana, Conrad

From: Betty Siwy <bsiwy@edgewoodrealty.com>
Sent: Thursday, June 03, 2021 5:31 PM
To: Viana, Conrad; Van Patten, Jason
Subject: The Affinity

Hi Conrad,

As requested, please see the information below required for the traffic study.

Project Address

491-577 South Arroyo Parkway
Pasadena, CA 91105

Project Description

Demolition: 45,912 sf commercial

~12,676 sf Animal Hospital (491 S. Arroyo Parkway)

~21,437 sf Event Rentals (503 S. Arroyo Parkway)

~7,493 sf former Margarita Jones that is currently a restaurant (525 S. Arroyo Parkway)

~4,306 sf former Dona Rosa that is currently a restaurant (577 S. Arroyo Parkway)

Construction:

Residential Building

151,000 sf with up to 197 residential units
3,000 sf ground-floor commercial space

Senior Living Facility

184,376 sf senior living facility consisting of 98,576 sf of independent living units (up to 95 units) and 85,800 sf of assisted living.

Existing Commercial (Two existing historic buildings)

5,882 sf commercial (use restaurant land use in analysis)

Name of Applicant

Appendix:
City's Travel Demand Forecasting Model Output/Results

491-577 South Arroyo Parkway

VMT/Cap and VT/Cap Calculations Summary

Daily Trips	Internal	External
Internal	351,620	336,246
External	336,246	491,130

Pop	136,563
Emp	111,620
Ext. Factor	50%

FINAL REDUCED DAILY VMT BY SPEED BIN					EMFAC
Speed	**Internal**	**External**	**Regional**	**Total**	**INPUT**
5	109	0	1,742	1,851	0%
10	674	135	14,369	15,177	0%
15	4,136	1,270	45,909	51,314	1%
20	16,832	4,554	75,245	96,631	2%
25	95,831	12,506	150,321	258,658	5%
30	493,451	61,709	275,333	830,493	15%
35	821,896	139,302	320,477	1,281,674	23%
40	201,312	55,914	225,651	482,877	9%
45	135,966	104,986	169,536	410,488	7%
50	112,562	2,076	211,917	326,555	6%
55	95,624	7,980	229,494	333,099	6%
60	120,031	15,506	238,314	373,851	7%
65	323,830	20,506	181,207	525,543	9%
70	3,640	0	529,500	533,140	11%
75	0	0	77,345	77,345	
80	0	0	0	0	
85	0	0	0	0	
SUM	**2,425,894**	**426,443**	**2,746,360**	**5,598,697**	**100%**

TOTAL RAW DAILY SUMMARY					
Metric	**Internal**	**External**	**Regional**	**Total**	**Capita**
VMT	2,425,894	852,886	5,492,721	8,771,501	35.3
VT	351,620	672,493	-	1,024,113	4.1
Length	6.9	1.3	-	8.6	-

REDUCED DAILY SUMMARY					
Metric	**Internal**	**External**	**Regional**	**Total**	**Capita**
VMT	2,425,894	426,443	2,746,360	5,598,697	22.6
VT	351,620	336,246	-	687,866	2.8
Length	6.9	1.3	-	8.1	-

FINAL DAILY SCENARIO SUMMARY					
Pop	**Emp**	**VMT**	**VT**	**VMT/Cap**	**VT/Cap**
136,563	111,620	5,598,697	687,866	22.6	2.8

2013 EXISTING SUMMARY					
Pop	**Emp**	**VMT**	**VT**	**VMT/Cap**	**VT/Cap**
135,938	111,348	5,591,328	686,619	22.6	2.8

INCREMENTAL SCENARIO RESULTS					
Pop	**Emp**	**VMT**	**VT**	**VMT/Cap**	**VT/Cap**
624	272	7,369	1,247	8.2	1.4
				PASS	PASS

491-577 South Arroyo Parkway

Proximity and Quality Metric Calculations Summary

Proximity and Quality of Bicycle Network

Existing

Facility Type	Service Population	Service Population Adjustment	Final Service Population	Percent of Service Population
Level 2	78,415	0	78,415	31.7%
Level 3	123,670	0	123,670	50.0%
No Facility	45,202	0	45,202	18.3%
Exist City Total	247,286	0	247,286	100.0%

Existing + Project

Facility Type	Service Population	Service Population Adjustment	Final Service Population	Percent of Service Population
Level 2	78,415	896.1949826	79,311	32.0%
Level 3	123,670	0	123,670	49.8%
No Facility	45,202	0	45,202	18.2%
Exist City Total	247,286	896.1949826	248,183	100.0%

Proximity and Quality Metric Summary - Bicycle

Network	Service Population Adjustment	Significant Impact Threshold	Service Population %	Impact?
Bike	896.1949826	< 31.7%	32.0%	No

Proximity and Quality of Transit Network

Existing

Facility Type	Service Population	Service Population Adjustment	Final Service Population	Percent of Service Population
Level 1	90,600	0	90,600	36.6%
Level 2	74,298	0	74,298	30.0%
Level 3	50,495	0	50,495	20.4%
No Facility	31,893	0	31,893	12.9%
Exist City Total	247,286	0	247,286	100.0%

Existing + Project

Facility Type	Service Population	Service Population Adjustment	Final Service Population	Percent of Service Population
Level 1	90,600	896.1949826	91,497	36.9%
Level 2	74,298	0	74,298	29.9%
Level 3	50,495	0	50,495	20.3%
No Facility	31,893	0	31,893	12.9%
Exist City Total	247,286	896.1949826	248,183	100.0%

Proximity and Quality Metric Summary - Transit

Network	Service Population Adjustment	Significant Impact Threshold	Service Population %	Impact?
Transit	896.1949826	< 66.6%	66.8%	No

491-577 South Arroyo Parkway

Pedestrian Accessibility Summary

					Weighted Average:	**3.891820038**
PasadenaDTATAZ	Land Use Types	Population_In_TAZ	Employment_In_TAZ	Service_Population	Land Use Types	
24	7	195.459975	346.3633968	541.8233718	7	