
Appendix B-2

Vehicle Miles Traveled Analysis



LOS Engineering, Inc.
Traffic and Transportation

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April 12, 2022

Ms. Ann Gonsalves, T.E.
City of San Diego
1222 First Avenue, MS 501
San Diego, CA 92101

Subject: Paseo Montril Vehicle Miles Traveled Analysis (PTS# 658273)

Dear Ms. Gonsalves:

LOS Engineering, Inc. is pleased to present this Vehicle Miles Traveled (VMT) analysis for the Paseo Montril multi-family project with 55 units. This analysis is consistent with the methodologies outlined in the City of San Diego *Transportation Study Manual* (September 2020). The following discretionary approvals are required as part of the project:

- 1) Community Plan Amendment/Rezone
- 2) Planned Development Permit
- 3) Site Development Permit
- 4) Vacation of Easements and Slope Rights

The Community Plan Amendment is to change the land use designation from Open Space to Medium Density Residential (5-10 DU/acre), and the Rezone from RS-1-14 and RM-2-5 to RM-1-1.

A Project Information Form (PIF) is required by the City of San Diego to determine if a Local Mobility Analysis (LMA) and/or a VMT based transportation analysis to evaluate transportation impacts under CEQA are required. The PIF is included as **Attachment A**.

PROJECT DESCRIPTION

The project is 55 multi-family units located at the eastern terminus of Paseo Montril east of Rancho Penasquitos Blvd in the Rancho Penasquitos Community of San Diego, California. The project site is currently vacant. The project is anticipated to open in the year 2024. Project access is from one driveway at the Paseo Montril eastern terminus cul-de-sac. The overall project site will also be divided into two parcels (one for the multi-family use and the remainder as open space). The project site is shown in **Figure 1**. A site plan is shown in **Figure 2**.

Figure 1: Project Location

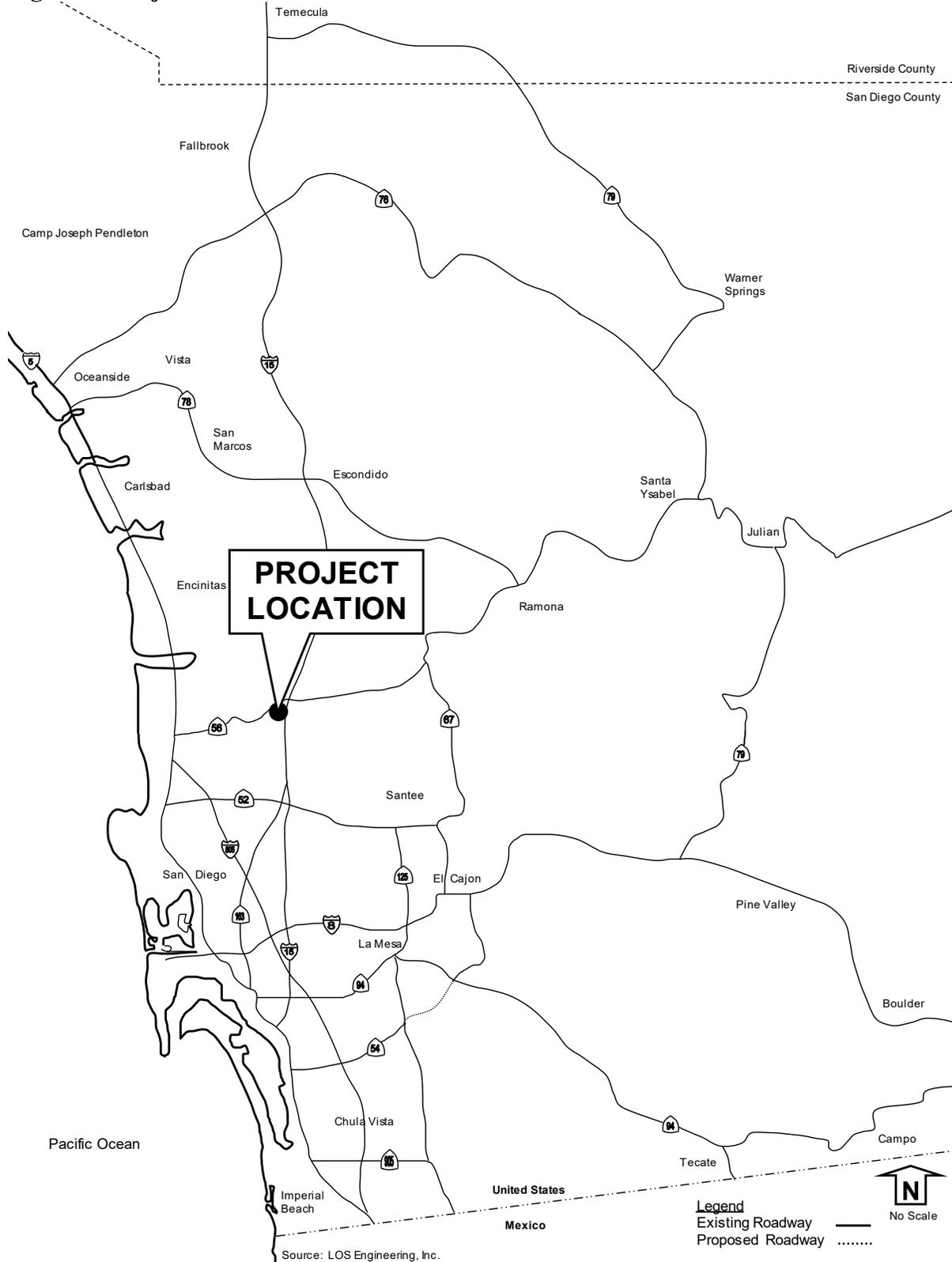
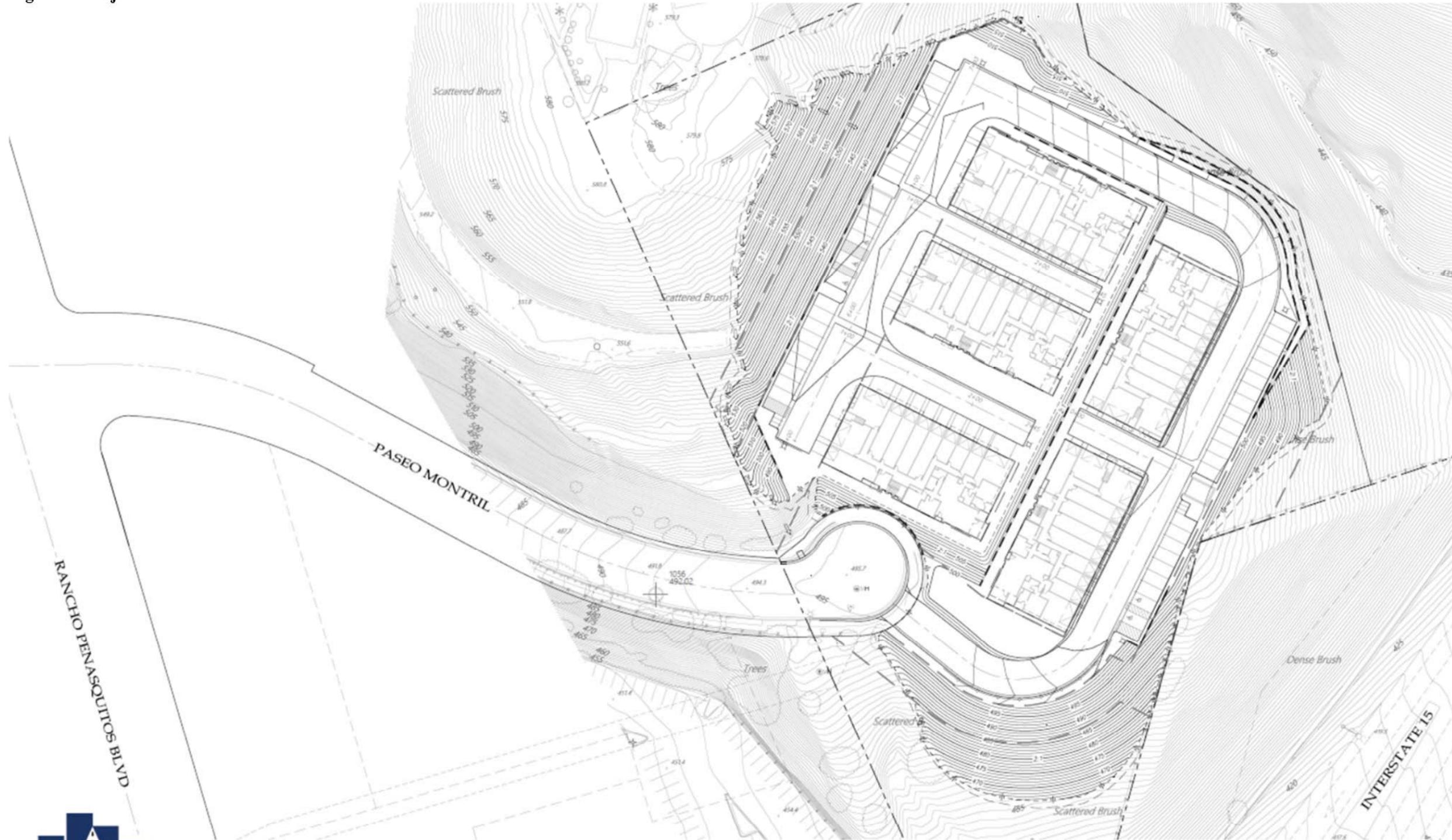
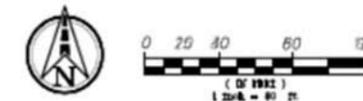


Figure 2: Project Site Plan



PASEO MONTRIL SITE PLAN
JANUARY 31, 2022



PROJECT TRIP GENERATION

The trip generation for the project was calculated using trip rates from the City of San Diego *Trip Generation Manual*, May 2003. The project is calculated to generate 440 ADT with 35 AM peak hour trips (7 inbound and 28 outbound) and 44 PM peak hour trips (31 inbound and 13 outbound) as shown in **Table 1**.

Table 1: Weekday Project Trip Generation

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM		%	Split	PM	
						IN	OUT			IN	OUT
Residential - Multi Family	8 /DU	55 DU	440	8%	0.2 0.8	7	28	10%	0.7 0.3	31	13
						AM Total: 35		PM Total:		44	

Source: City of San Diego *Trip Generation Manual*, May 2003. DU: Dwelling Unit. ADT-Average Daily Traffic.

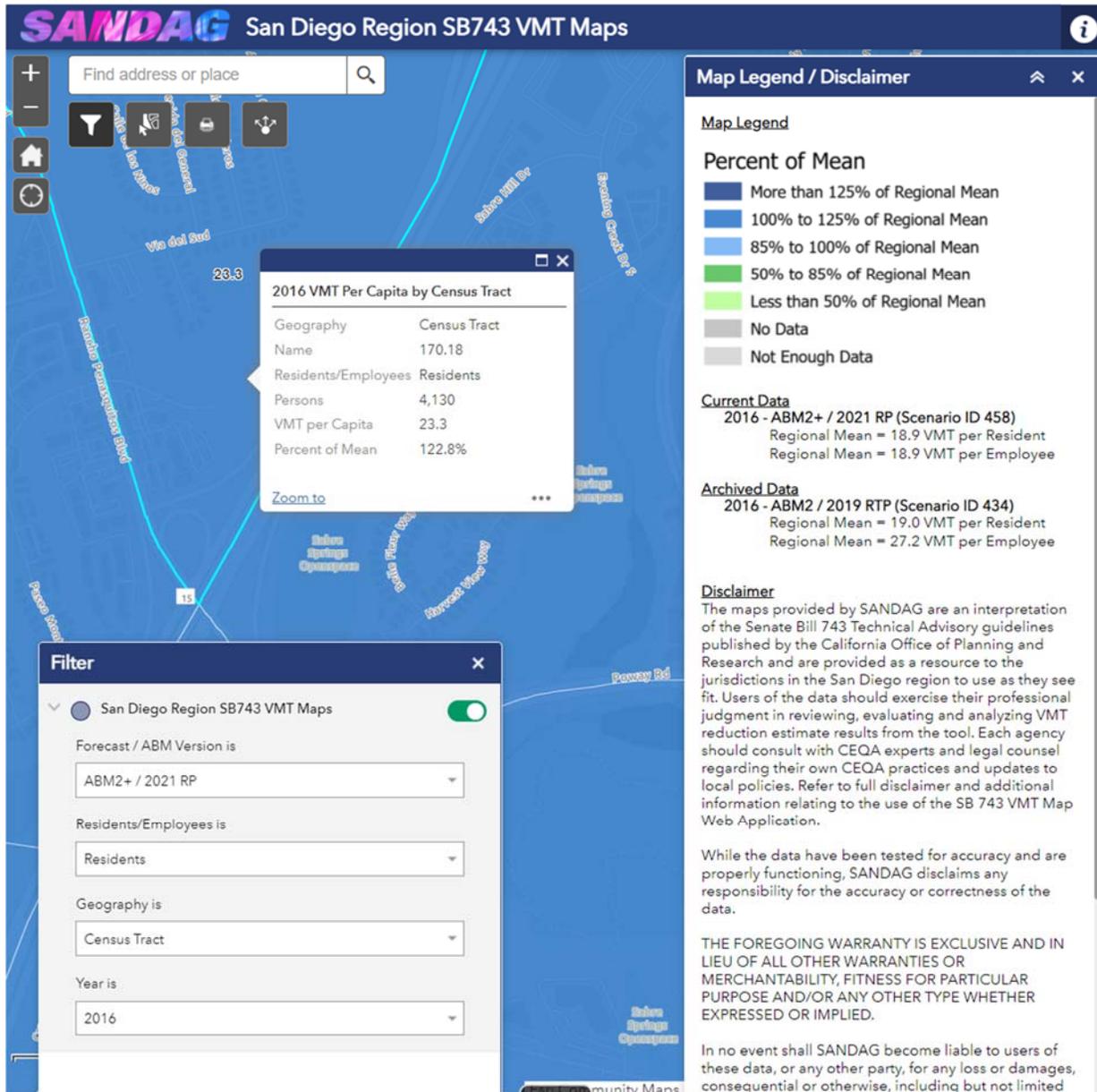
VEHICLE MILES TRAVELED ANALYSIS

The following VMT screening criterion from the City of San Diego’s Transportation Study Manual was utilized to determine if the project would be screened out from VMT analysis due to project characteristics and/or location:

- **Residential Project Located in VMT Efficient Area** (15% or more below average VMT/capita)

The project VMT per Capita by Census Tract was obtained from the SANDAG ABM2+ Series 14 Base Year 2016 screening map. The project is located in census tract 170.18 that has an existing VMT per capita of 23.3 that is 122.8% of the regional mean of 18.9 VMT per capita, which is above the 85th percentile mean VMT per Capita for the region. The VMT per Capita by Census Tract is shown in **Figure 3**.

Figure 3: SANDAG 2016 VMT per Capita by Census Tract Project Location



SIGNIFICANCE DETERMINATION

Since the project did not satisfy the above screening criterion, it must evaluate the VMT produced by the project. This residential project is expected to generate less than 2,400 daily unadjusted driveway trips and therefore, the project’s VMT per capita will be considered the same as the VMT per capita of the census tract which it is located and a SANDAG ABM2+ model run would not be required to evaluate project VMT/capita.

As stated above, the project is located within census tract 170.18 with 23.3 VMT per Capita (SANDAG Series 14 ABM2+ Base Year 2016), or 122.8% of the regional mean. The proposed project would have a significant VMT impact based on the significance threshold for a residential project of 15% below the regional mean VMT per Capita. Therefore, mitigation to the extent feasible is required to reduce the project’s VMT impact.

PROJECT VMT MITIGATION

The City of San Diego *Transportation Study Manual* (September 2020) recommends VMT mitigation through either reducing the number of automobile trips or by reducing the distance that people drive.

To reduce the VMT transportation impact, the December 2021 California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* was reviewed for applicability.

The CAPCOA Handbook (December 2021) VMT mitigation measures were reviewed and determined that two (2) strategies from the Land Use category with quantifiable VMT reduction measures were applicable based on the project location and characteristics (**Attachment B**). A single category was applied based on the CAPCOA direction of not combining reduction from different scales of application. A summary of the applicable strategies and potential VMT reduction is shown in **Table 2**.

TABLE 2: CAPCOA VMT REDUCTION STRATEGIES

CAPCOA VMT Mitigation Strategy	VMT Reduction Range %	Application	Project VMT % Reduction
T-1. Increase Residential Density	0-30%	A project with increased density results in shorter and fewer trips by single-occupancy vehicles.	-0.86%
T-4. Integrate Affordable and Below Market Rate Housing	0-28.6%	Project includes six (6) affordable units.	-3.12%
T-9 Implement Subsidized or Discounted Transit Program	0-5.5%	A 25% transit pass subsidy to all project residents for the first five years.	-0.13%

Source: CAPCOA Handbook December 2021.

VMT reduction measures are not directly additive and requires application of a multiplicative formula to account for measure redundancy. The multiplicative formula is as follows:

$$\text{Overall VMT \% Reduction} = 1 - (1 - A) * (1 - B) * (1 - C) \dots$$

Where A, B, and C are the individual mitigation measures.

$$\text{CAPCOA VMT \% Reduction} = 1 - (1 - 0.0086) * (1 - 0.0312) * (1 - 0.0013) = 0.0408 = 4.10\%$$

As shown in **Table 3**, the VMT transportation impact is NOT mitigated to below a level of significance because the final VMT is above 85% after application of CAPCOA strategies.

TABLE 3: PROJECT VMT MITIGATION BASED ON CAPCOA STRATEGIES

Project VMT	Total VMT Mitigation % Reduction	VMT after Mitigation	Post Mitigation VMT below 85% and Mitigated?
122.80%	4.10%	118.70%	No

In an effort to help reduce the project VMT to the extent feasible, the Permittee will implement the following:

TRA-1: Pedestrian Improvements. Prior to the issuance of the first building permit, Permittee shall assure by permit and bond the construction/improvement of Standard sidewalk along the south side Paseo Montril, satisfactory to the City Engineer. This includes providing a continuous concrete sidewalk from the project access to Rancho Peñasquitos Boulevard.

TRA-2: Bike Parking. Prior to the issuance of the first occupancy permit, the Permittee shall provide 10 short term bike parking spaces on site.

TRA-3: Transit Passes. Prior to first occupancy, the Permittee shall implement a transit subsidy program to offer a 25% transit subsidy to all residents of the development for the first five year period. The subsidy value will be limited to the equivalent value of 25% of the cost of an MTS “Regional Adult Monthly/30-Day Pass” (currently \$72, which equates to a subsidy value of \$18 per month). Subsidies will be available on a per unit basis to residential tenants for a period of five years (five years after issuance of the first occupancy permit). In no event shall the total subsidy exceed \$59,400. Permittee shall provide an annual report to the City Engineer in each of the first five years demonstrating how the offer was publicized to residents and documenting the results of the program each year, including number of participants and traffic counts at the project entrance.

TRA-4: Commute Trip Reduction Program. Prior to first occupancy, the Permittee shall develop and implement commute trip reduction program that requires each homeowner and tenant to be provided with a one page flyer every year that provides information regarding available transit, designated bicycle routes, local bicycle groups and programs, local walking routes and programs, and rideshare programs.

TRA-5: Bicycle Micromobility Fleet. Prior to first occupancy, the Permittee shall provide one bicycle (up to a \$400 value) per unit to the first buyer of each unit.

The proposed VMT reduction measures cannot be assured to reduce the VMT to below 85% of the mean; therefore, the Project will continue to have a significant and unavoidable VMT transportation impact.

CONCLUSION

The residential 55 multi-family unit Paseo Montril project is forecasted to have a significant VMT transportation impact because the project location in census tract 170.18 is at 122.80% of the mean VMT per Capita for the region and the proposed project is expected to have similar VMT per Capita (well over the 85% threshold for significance).

To consider other feasible VMT mitigation measures to reduce the VMT transportation impact, CAPCOA Handbook (December 2021) VMT mitigation strategies were reviewed for project applicability. Applicable strategies did not reduce the VMT to less than significant; therefore, the Permittee has proposed the following VMT reduction strategies:

TRA-1 Pedestrian Improvements. Provide pedestrian sidewalk along missing sections on the south side of Paseo Montril between the project site and Rancho Penasquitos Blvd.

TRA-2 Bike Parking. Provide 10 on-site bike parking spaces.

TRA-3 Transit Passes. Provide a transit subsidy program with a 25% transit subsidy to residents of the development for the first five year period

TRA-4 Commute Trip Reduction Program. Provide a commute trip reduction program that requires each homeowner and tenant to be provided with a one page flyer every year that provides information regarding available transit, designated bicycle routes, local bicycle groups and programs, local walking routes and programs, and rideshare programs.

TRA-5 Bicycle Micromobility Fleet. Provide one bicycle (up to a \$400 value) per unit to the first buyer of each unit.

The proposed VMT reduction measures cannot be assured to reduce the VMT to below 85% of the mean; therefore, the Project will continue to have a significant and unavoidable VMT transportation impact.

Sincerely,
LOS Engineering, Inc.

Justin Rasas
Justin Rasas, P.E.(TE 2135), PTOE
Principal and Officer of LOS Engineering, Inc.

Job 1730
Attachments



SEALED ON 4/12/2022

ATTACHMENT A

Project Information Form



City of San Diego Project Information Form

Project Information

Project Name:				
Project Applicant				
Name:				
Address:				
Contact Information	Phone Number:		Email:	
Project Location and Context				
Project Address:				
APN:				
Driveway Cross Streets:				
Please attach a Project Location Map that clearly identifies project driveways and access points.				
Community Plan Area:		Land Use Designation:		Zoning Designation:
Is any portion of the project located in an RTIP Transit Priority Area?: <input type="checkbox"/> Yes <input type="checkbox"/> No				
Project Description (with Proposed Land Uses and Intensities):				
Number of Parking Spaces:	Vehicle Spaces	Accessible Spaces	Bicycle Spaces <i>(racks and secure Storage)</i>	Motorcycle Spaces
Identify any project features related to TDM and Identify any transportation amenities or travel demand management measures that are required based on the San Diego Municipal Code Section 142.0528 (transportation amenities) or the Climate Action Plan Consistency Checklist. For example: transit pass subsidies, unbundled parking, shuttle services, car share, bicycle supportive features (bike repair station, bike lockers, etc.).				
Please attach a project site plan that clearly identifies the following:				
<ul style="list-style-type: none"> • Land use types and quantities, and number of parking spaces provided (vehicle and bicycle) clearly identified. • Driveway locations and type (full access, partial access, right in/out only) identified. • Pedestrian access, bicycle access and on-site pedestrian circulation clearly identified. • Location/distance of closest existing transit stop and proposed transit stops identified in RTIP (measured as walking distance to project entrance/or middle of parcel). 				



City of San Diego Project Information Form

Trip Generation Estimates (calculated using the process described in the TSM):	Unadjusted Driveway Trips		Total Net New Trips	
	Daily:		Daily:	
	AM Peak Hour:		AM Peak Hour:	
	PM Peak Hour:		PM Peak Hour:	

Preliminary Screening Criteria

CEQA Transportation Analysis Screening		Screened Out	Not Screened Out
1) Select the Land Uses that apply to your project 2) Answer the questions for each Land Use that applies to your project <i>(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)</i>		Yes	No
<input type="checkbox"/>	1. Redevelopment Project: a. Does the project result in a net decrease in total Project VMT? b. Answer if yes to 1a. If the project replaces affordable housing with market rate housing, are there more market rate units planned than existing affordable units being replaced.		
<input type="checkbox"/>	2. Residential Project: a. Is the project in a VMT/Capita Efficient Area (per SANDAG screening maps)? b. Does the project include Affordable Housing? $\frac{\text{Affordable Units}}{\text{Total Units}} + \frac{\text{Market Rate Units}}{\text{Total Units}} = \frac{\text{Total Units}}{\text{Total Units}}$ All affordable units are screened out.		
<input type="checkbox"/>	3. Commercial Employment Project: • Is the project in a VMT/Employee Efficient Area? (per SANDAG screening maps?)		
<input type="checkbox"/>	4. Industrial Employment Project • Is the project in a VMT/Industrial Employee Efficient Area?		
<input type="checkbox"/>	5. Retail/Public Facility/Recreational • Is the project locally serving: - Retail OR Public Facility OR Recreational		
<input type="checkbox"/>	6. Small Project • For all components of a project that are not screened out above (all 'Yes' in a land use category), what is the daily unadjusted driveway trip generation? _____ Is it less than 300 daily trips?		

Local Mobility Analysis		
Is your project's land use consistent with the Community Plan zoning?	<input type="checkbox"/> Consistent <input type="checkbox"/> Generates less than 1,000 daily trips (unadjusted driveway trips)	<input type="checkbox"/> Inconsistent <input type="checkbox"/> Generates less than 500 daily trips (unadjusted driveway trips)
Will project development be phased?		In what month are traffic counts planned to be conducted?



City of San Diego Project Information Form

If a project generates 1,000 or more daily trips (consistent with Community Plan Zoning) or 500 or more daily trips (inconsistent with Community Plan zoning), attach an exhibit showing the project's trip distribution percentages and project trip assignment using the process described in the TSM.

ATTACHMENT B

CAPCOA Dec 2021 Handbook VMT Mitigation Measures

VMT Transportation Mitigation Measures (CAPCOA December 2021)

VMT Mitigation	Description	Possible % Reduction	VMT % Reduction	Calculations
T-1. Increase Residential Density	Proposed. A project with increased density results in shorter and fewer trips by single-occupancy vehicles. Due to the site constraints, additional increase in density is not possible.	0-30%	-0.86%	% Reduction A = (B-C)/C X D, where B = 1,456 units (base of 1,401 from City Long Range Planning + project 55 units). C = 1,401 from City Long Range Planning based on Census Tract. D = -0.22 Elasticity of VMT from pg 71 of 2021 CAPCOA. $A = ((1,456 - 1,401) / 1,401) \times -0.22 = -0.86\%$
T-4. Integrate Affordable and Below Market Rate Housing	Proposed. Project includes six (6) affordable units.	0-28.6%	-3.12%	% Reduction A = B x C, where B = 10.9% units (6/55) of multi-family units dedicated as affordable (deed restricted per pg 81 of 2021 CAPCOA). C = -28.6% reduction in VMT for qualified units compared to market rate units per pg 81 of 2021 CAPCOA. $A = 10.9\% \times -28.6\% = -3.12\%$
T-9 Implement Subsidized or Discounted Transit Program	Proposed. Project is within 0.5 miles of bus stops. A 25% transit pass subsidy to all project residents for five years is proposed as part of the project.	0-5.5%	-0.13%	% Reduction A = C/B x G x D x E x F x H x I, where: B = \$72 Avg transit fare without subsidy. C = \$18 Subsidy amount. D = 100% of employees/residents eligible for subsidy (there are no on-site employees). E = 100% of project-generated VMT from residents taken at 100% per pg 96 of 2021 CAPCOA as project is multi-family with no on-site employees. F = 2.4% Transit mode share from Table T-3.1 pg C-1 of 2021 CAPCOA. G = -0.43 from pg 96 of 2021 CAPCOA. H = 50% from pg 96 of 2021 CAPCOA. I = 1 Conversion factor of vehicle trips to VMT from pg 96 of 2021 CAPCOA. $Reduction\ A = (18(c)/72(b)) \times -0.43(g) \times 1(d) \times 1(e) \times 0.024(f) \times 0.5(h) \times 1(i) = -0.129 = -0.13\%$

Project VMT (SANDAG ABM2+ Series 14 2016 Screening Map Census Tract 170.18) = 122.8%

Combined VMT Reduction = $1 - [(1-A) \times (1-B)] = 1 - [(1-0.86\%) \times (1-3.12\%) \times (1-0.13\%)] = 4.1\%$

Project VMT with Mitigation = 122.8% - 4.1% = 118.7%