FEHR PEERS

Memorandum

Date: July 13, 2022

To: Antonio Gardea, City of Redondo Beach

From: Michael Kennedy & Nico Boyd, Fehr & Peers

Subject: Catalina Village VMT Analysis Updates for City of Redondo Beach Planning Commission

LB20-0012

At the City of Redondo Beach Planning Commission hearing on May 19, 2022, the Catalina Village project (Project) applicant indicated that the project description and site plan had been revised to reflect a total of 122 bedrooms across 30 dwelling units, whereas the previous project description and site plan showed a total of 130 bedrooms across 30 dwelling units. This memorandum has been prepared at the request of the Planning Commission to assess how this change to the project description and site plan may affect the results of the VMT analysis that was presented in the Draft Environmental Impact Report (DEIR). More specifically, this memorandum answers two (2) questions that have been posed by the Planning Commission:

1. What is the Project's new Home-Based VMT per Capita metric under the updated project description? Does the reduction in the total number of bedrooms being provided by the Project result in a less than significant impact to VMT?
2. How many total dwelling units would the Project need to provide to avoid a significant impact altogether?

The following sections detail the analyses that were conducted to answer these questions and present our findings and conclusions.

Question 1

Under the applicant's previous project description and site plan, the Project would have provided 130 bedrooms across 30 dwelling units. However, for the EIR VMT analysis, Fehr & Peers' understanding was that the Project would provide 124 bedrooms. Under the recently revised project description, the Project would provide 122 bedrooms across 30 dwelling units. To address the discrepancy between the previous project description and what was analyzed for the EIR (130

bedrooms vs. 124 bedrooms), this section updates the EIR VMT analysis to reflect the 130 bedrooms that were originally proposed and then presents the VMT analysis that was conducted for the revised project description featuring 122 bedrooms.

Updated EIR VMT Analysis – 130 Bedrooms

The following steps were undertaken to estimate the Project-generated Home-Based VMT per Capita under the previous project description and site plan:

Step 1 – Develop a Bedrooms Per Dwelling Unit Equivalency Factor

According to data from the U.S. Census Bureau, 3 bedrooms per dwelling unit is the average for all multifamily developments in Redondo Beach. However, the Project would provide a total of 130 bedrooms spread across 30 dwelling units, yielding an average of 4.3 bedrooms per dwelling unit. Considering this, analyzing the Project as proposed could underestimate the total VMT generated by the Project if each unit ultimately has more residents than is typical due to the number of bedrooms in each unit. While the number of bedrooms may not ultimately lead to more residents, as extra bedrooms could be used as home offices, guest bedrooms, or other uses, a bedrooms per dwelling unit equivalency factor was developed to ensure that the VMT estimates do not underestimate the potential for a significant VMT impact.

The bedrooms per dwelling unit equivalency factor was developed by dividing the total number of bedrooms provided by the Project (n=130) by the average number of bedrooms per dwelling unit in Redondo Beach (n=3) and rounding up to the nearest whole number, yielding a total of 44 dwelling units. This adjusted total of 44 dwelling units was used to analyze the Project's Home-Based VMT per Capita.

Step 2 – Determine Average Person Trip Rates from the SCAG Model

To be consistent with the methodology used for developing the City's residential VMT significance threshold, Fehr & Peers used the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) model average person trip rate for multifamily residential land uses. The Transportation Analysis Zone (TAZ), or zone within the model, that contains the Project has a much lower residential trip rate compared with the rest of the City, and is therefore an outlier. Fehr & Peers determined that relying solely on the existing person trip rate for the TAZ in which the Project is located may underestimate the Project's VMT. To account for this and provide a conservative analysis, Fehr & Peers identified the person trip rate for 23 TAZs in the City of Redondo Beach whose land use characteristics are primarily multifamily residential in nature. The person trip rates for these TAZs were averaged to yield a residential person trip rate of 2.6 daily trips per capita, which is the rate that was used to analyze the market rate dwelling units proposed by the Project.

Four of the Project's proposed 30 dwelling units, or 13%, will be provided at below-market-rate. While the affordable portion of the project will generate new VMT, research shows that affordable

units tend to have lower trip generation (and as a result VMT generation) than market rate units. While the City of Redondo Beach has not conducted any local trip generation studies that could substantiate a difference in trip generation and VMT for affordable housing, Fehr & Peers conducted such a study in the City of Los Angeles in 2016 and found that affordable housing developments that predominantly serve families generated an average of 4.16 trips per dwelling unit per day, compared to the Institute of Transportation Engineers (ITE) rate of 7.32 trips per dwelling unit per day that is used for comparable market rate developments (ITE 220). Table 2 of Appendix B of the DEIR presents the results of the trip generation study conducted in the City of Los Angeles.

The land use and trip generation characteristics of the locations where the empirical data described in Appendix B of the DEIR were collected may be different than the land use and trip generation characteristics in the vicinity of the Project. While ITE has recently published trip generation rates for affordable housing, only peak hour rates are currently available, and all of the analysis presented in this report relies on daily rates. As such, the data provided in Appendix B of the DEIR is the best data currently available for estimating the VMT generated by affordable housing units. Based on the empirical data from the City of Los Angeles, the residential person trip rate for the Project's affordable units was estimated to be 1.48 daily trips per capita. Considering that 13% of the Project's dwelling units would be provided at below-market-rate, this percentage was applied to the bedroom equivalency adjusted total of 44 dwelling units to yield 6 affordable units.

To estimate the number of residents that would occupy the proposed Project, Fehr & Peers multiplied the bedroom equivalency adjusted number of dwelling units (38 market rate units and 6 affordable units) by the Redondo Beach average household size of 2.4, which was obtained from the U.S. Census Bureau. This yields a total Project population of 105 residents. Importantly, the calculation of the number of residents that would occupy the proposed Project was done using a different methodology in the transportation section of the Draft EIR compared to other sections of the Draft EIR. CEQA requires an analysis of the potential impacts associated with unplanned population growth. This analysis is provided in Section 14, *Population and Housing*, of the Initial Study (Appendix B of the Draft EIR), which conservatively applied the City's average household size of 2.3 persons to the project's bedroom count of 130 bedrooms, rather than the usual approach of applying the average household size to the total unit count, as was done in the transportation section of the Draft EIR.

This unique application was intended to account for the higher number of bedrooms per unit proposed under the project. For instance, while the revised project will now offer units with up to five bedrooms maximum, the original project provided 15 5-bedroom units, one 6-bedroom unit, and three 7-bedroom units. This conservative approach resulted in a calculation of 299 residents generated by the project (an approximately 0.5 percent increase from the existing population), which was also applied to the analyses for air quality emissions, public services, recreational resources, and utilities and service systems. The growth in population with this conservative

estimate is within SCAG's 2045 population forecast for the City; therefore, the analyses in the EIR and Initial Study determined that the population growth associated with the project would not result in any significant environmental impacts. To provide a conservative analysis of VMT in the transportation section of the Draft EIR, and in this memorandum, a bedrooms per dwelling units equivalency factor was developed, as described above, which resulted in an analysis of more dwelling units than are actually proposed by the Project.

Step 3 – Average Person Trip Rate to Vehicle Trips Conversion

Before conducting the VMT calculations, person trips need to be converted into vehicle trips. Average mode splits for the City of Redondo Beach were obtained from the 2016 SCAG RTP model, and average vehicle occupancy (AVO) for all home-based (residential) trips in Redondo Beach was obtained from the 2010 California Household Travel Survey (CHTS)[1] because AVO estimates are not available directly from the SCAG model and the CHTS data are statistically significant survey data for the City of Redondo Beach. For residential trips, 43% of trips were assumed to occur in vehicles occupied by one person (SOV) and 40% in vehicles occupied by an average of 2.5 people (HOV). The remaining 17% of trips would take place using alternative modes such as walking, biking, or transit, and are not expected to generate VMT.[2]

Step 4 – Estimate Trip Length

Trip length was estimated using data from the 2016 SCAG RTP model. The travel model has the ability to produce average trip lengths for each TAZ in the City of Redondo Beach. To maintain consistency with the methodology that was used to estimate the person trip rate described above in Step 2, the average trip lengths for residential trips for the 23 Redondo Beach TAZs that were used in Step 2 were averaged to yield a residential trip length of 10.0, which is the trip length that was used to analyze all of the dwelling units proposed by the Project.

Step 5 – VMT Calculation

The final step to calculate VMT is to multiply the number of vehicle trips by the average trip length of those trips. The results are presented in **Table 1** below and are compared against the SBCCOG significance threshold for Home-Based VMT per Capita of 11.1.

[1] The 2010 CHTS is the most recent statewide household travel survey available.

[2] The OPR *Technical Advisory* only recommends analyzing the VMT generated by private automobiles. As such, this analysis does not account for VMT generated from other sources including transit vehicles, delivery vehicles, or others.

Table 1 – Home-Based VMT per Capita Calculation – 130 Bedrooms

Dwelling Unit Type	Population	Mode Split (SOV)	Mode Split (HOV)	Average Vehicle Occupancy (HOV)	Average Trip Length (Miles)	Person Trip Rate	VMT per Capita	Impact Threshold	Impact?
Market Rate	91	43%	40%	2.5	10.0	2.60	-	-	-
Affordable	14					1.48			
Total	105					-	**14.6**	***11.1***	**YES**

Revised Project Description VMT Analysis – 122 Bedrooms

To update the VMT analysis described above to reflect the 122 bedrooms that are proposed under the revised project description, the same steps were undertaken. However, while the revised project description provides fewer bedrooms than the 130 that were originally proposed, the updated total of 122 bedrooms spread across 30 dwelling units would yield an average of 4.1 bedrooms per dwelling unit, which is still higher than the Citywide average of 3 bedrooms per dwelling unit. Because of this, Fehr & Peers updated the analysis described in Step 1 above to develop a new bedrooms per dwelling unit equivalency factor. This equivalency factor was developed by dividing the total number of bedrooms provided by the Project (n=122) by the average number of bedrooms per dwelling unit in Redondo Beach (n=3) and rounding up to the nearest whole number, yielding a total of 41 dwelling units. This adjusted total of 41 dwelling units was used to analyze the revised Project's Home-Based VMT per Capita. **Table 2** below presents the results of the VMT analysis that was conducted for the revised Project.

Table 2 – Home-Based VMT per Capita Calculation – 122 Bedrooms

Dwelling Unit Type	Population	Mode Split (SOV)	Mode Split (HOV)	Average Vehicle Occupancy (HOV)	Average Trip Length (Miles)	Person Trip Rate	VMT per Capita	Impact Threshold	Impact?
Market Rate	86	43%	40%	2.5	10.0	2.60	-	-	-
Affordable	12					1.48			
Total	98					-	**14.6**	***11.1***	**YES**

VMT Analysis Comparison

As shown above, the Project as it was originally proposed (130 bedrooms) would have a significant impact on VMT, and the revised Project (122 bedrooms) would also have a significant impact on VMT. To illustrate the reason for these findings, **Table 3** presents a comparison of the key VMT inputs and findings for both versions of the project description.

Table 3 – VMT Analysis Comparison

Metric	Original Project (130 Bedrooms)	Revised Project (122 Bedrooms)	Absolute Change	Percent Change
Home-Based VMT	1,530	1,432	-98	-6.4%
Estimated Population	105	98	-7	-6.6%
Home-Based VMT per Capita	**14.6**	**14.6**	**0**	**0%**

As shown in **Table 3**, the reduction in the total number of bedrooms being provided by the Project results in a 6.4 percent decrease in total Home-Based VMT and a 6.6% reduction in the Project's estimated population of residents. However, as indicated in OPR's *Technical Advisory*, VMT for residential land use development projects should be evaluated on a per capita basis rather than looking at the absolute change in Home-Based VMT alone. Considering this, **Table 3** illustrates that while Home-Based VMT and estimated population are both reduced under the revised project description, the ratio of Home-Based VMT to estimated population remains unchanged compared to the original project description. Therefore, the revised Project would still have a significant and unavoidable impact on VMT.

Question 2

As demonstrated above under Question 1, reducing the number of bedrooms being provided by the Project will reduce its total VMT, but does not reduce the magnitude of the Project's VMT impact. This is because VMT for residential land use development projects is evaluated on a per capita basis rather than looking at the absolute change in Home-Based VMT. Reducing the size of the Project (i.e., providing fewer dwelling units or fewer bedrooms) will result in a reduction in both residential VMT generated by the Project and the estimated population of residents who would live at the Project site. Because these two inputs are reduced proportionally with the reduction in

dwelling units or bedrooms being provided, a smaller Project will have a per capita VMT impact that is equal in magnitude to a larger Project.

While reducing the size of the residential component of the Project does not result in a less than significant VMT impact, the City of Redondo Beach has adopted screening criteria that can be used to screen land use projects from requiring a detailed VMT analysis. One of these screening criteria pertains to project size and stipulates that a project may qualify for screening if the project as a whole (i.e., all components of the project) would generate 110 net external vehicle trips or less. Considering this, Fehr & Peers updated the trip generation analysis presented in the DEIR to identify the project size that would satisfy this screening criterion and developed three options that meet the net external vehicle trip threshold of 110 daily trips or less[3]. **Table 4** presents the proposed Project land uses and the land use mix for the three options that were identified to meet the project size screening criterion. **Table 5** presents a detailed trip generation table for Option #1, **Table 6** presents a detailed trip generation table for Option #2, and **Table 7** presents a detailed trip generation table for Option #3. Alternatively, the Project could avoid a significant VMT impact by increasing the number of below-market-rate units provided to approximately 52% of the total units (16 dwelling units), as described in Alternative 3 of the DEIR.

[3] The three options described in this memorandum were not analyzed as project alternatives in the DEIR because of their potential for triggering cultural resources impacts under CEQA.

Table 4. Land Use Mix for Project Size Screening Criterion

Land Use	Proposed Project	Option #1	Option #2	Option #3
Multifamily Residential (Market Rate)	26 dwelling units	26 dwelling units	7 dwelling units	7 dwelling units
Multifamily Residential (Affordable)	4 dwelling units	4 dwelling units	2 dwelling units	3 dwelling units
Coffee Shop	1,784 square feet	0 square feet	800 square feet	1,120 square feet
Tasting Room	1,279 square feet	0 square feet	800 square feet	0 square feet
Net External Daily Vehicle Trips	**525**	**0**	**109**	**109**

Notes:
The calculation of net external vehicle trips accounts for trip generation associated with the existing land uses on the Project site.

As shown in **Table 4**, meeting the net external vehicle trip threshold of 110 daily trips or less, and therefore avoiding a VMT impact, would require that the Project do one of the following: (1) remove the coffee shop and tasting room and provide 30 dwelling units, including 4 below-market-rate units; (2) reduce the number of dwelling units by approximately 70% compared with the applicant's revised proposal and reduce the size of the coffee shop and tasting room, or; (3) reduce the number of dwelling units by approximately 67% compared with the applicant's revised proposal, reduce the size of the coffee shop, and remove the tasting room.

TABLE 5
CATALINA VILLAGE PROJECT
VEHICLE TRIP GENERATION ESTIMATES - PROJECT SIZE SCREENING OPTION #1

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
				AM Peak Hour			PM Peak Hour				AM Peak Hour Trips			PM Peak Hour Trips		
			Daily	Rate	In%	Out%	Rate	In%	Out%	Daily	In	Out	Total	In	Out	Total
PROPOSED PROJECT																
Multifamily Residential (Low-Rise)	220	26 DU	7.32	0.46	23%	77%	0.56	63%	37%	190	3	9	12	9	6	15
Multifamfily Residential (Affordable)	[b]	4 DU	4.16	0.52	38%	62%	0.38	55%	45%	17	1	1	2	1	1	2
Coffee Shop [c]	936	0 ksf	364.35	101.14	51%	49%	36.31	50%	50%	0	0	0	0	0	0	0
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	0	0	0	0	0	0	0
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	0	0	0	0	0	0	0
Net External Coffee Shop										0	0	0	0	0	0	0
Tasting Room [f]	925	0 ksf	#DIV/0!	-	-	-	11.36	66%	34%	0	0	0	0	0	0	0
Internal Capture [d]			*1%*					*6%*	*6%*	0	0	0	0	0	0	0
Walk/Bike [d]			*37%*					*29%*	*29%*	0	0	0	0	0	0	0
Net External Tasting Room										0	0	0	0	0	0	0
Total External Vehicle Trips										*207*	*4*	*10*	*14*	*10*	*7*	*17*
EXISTING USE CREDIT																
General Office	710	1.3 ksf	9.74	1.16	86%	14%	1.15	16%	84%	(13)	(2)	0	(2)	0	(1)	(1)
Commercial Retail	820	8.3 ksf	37.75	0.94	62%	38%	3.81	48%	52%	(313)	(5)	(3)	(8)	(15)	(17)	(32)
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	3	0	0	0	1	1	2
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	116	2	1	3	4	5	9
Net Commercial Retail										(194)	(3)	(2)	(5)	(10)	(11)	(21)
Total Existing Use Credit										*(207)*	*(5)*	*(2)*	*(7)*	*(10)*	*(12)*	*(22)*
NET EXTERNAL VEHICLE TRIPS										0	(1)	8	7	0	(5)	(5)

Notes:

[a] Source: Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition* , 2017. Unless otherwise notes, all rates are Peak Hour of Adjacent Street Traffic.

[b] Source: City of Los Angeles' Local Affordable Housing Trip Generation Study (see Appendix B).

[c] The number of daily trips was estimated to be 10 times greater than the total PM peak hour trips.

[d] Internal capture represents the percentage of trips between land uses that occur within the site. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[e] The Walk/Bike credit includes non-auto trips from the surrounding neighborhood. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[f] The number of daily trips was estimated to be 10 times greater than the total PM Peak Hour trips based on the PM Peak Hour of the Generator rate (15.53 trips/ksf).

TABLE 6
CATALINA VILLAGE PROJECT
VEHICLE TRIP GENERATION ESTIMATES - PROJECT SIZE SCREENING OPTION #2

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
				AM Peak Hour			PM Peak Hour				AM Peak Hour Trips			PM Peak Hour Trips		
			Daily	Rate	In%	Out%	Rate	In%	Out%	Daily	In	Out	Total	In	Out	Total
PROPOSED PROJECT																
Multifamily Residential (Low-Rise)	220	7 DU	7.32	0.46	23%	77%	0.56	63%	37%	51	1	2	3	3	2	4
Multifamfily Residential (Affordable)	[b]	2 DU	4.16	0.52	38%	62%	0.38	55%	45%	8	0	1	1	1	0	1
Coffee Shop [c]	936	0.8 ksf	364.35	101.14	51%	49%	36.31	50%	50%	291	41	40	81	15	14	29
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	(3)	(1)	(1)	(2)	(1)	(1)	(2)
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	(109)	(17)	(16)	(33)	(4)	(4)	(8)
Net External Coffee Shop										179	23	23	46	10	9	19
Tasting Room [f]	925	0.8 ksf	155.30	-	-	-	11.36	66%	34%	124	0	0	0	6	3	9
Internal Capture [d]			*1%*					*6%*	*6%*	(1)	0	0	0	0	0	0
Walk/Bike [d]			*37%*					*29%*	*29%*	(46)	0	0	0	(2)	(1)	(3)
Net External Tasting Room										77	0	0	0	4	2	6
Total External Vehicle Trips										*316*	*24*	*26*	*50*	*17*	*13*	*30*
EXISTING USE CREDIT																
General Office	710	1.3 ksf	9.74	1.16	86%	14%	1.15	16%	84%	(13)	(2)	0	(2)	0	(1)	(1)
Commercial Retail	820	8.3 ksf	37.75	0.94	62%	38%	3.81	48%	52%	(313)	(5)	(3)	(8)	(15)	(17)	(32)
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	3	0	0	0	1	1	2
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	116	2	1	3	4	5	9
Net Commercial Retail										(194)	(3)	(2)	(5)	(10)	(11)	(21)
Total Existing Use Credit										*(207)*	*(5)*	*(2)*	*(7)*	*(10)*	*(12)*	*(22)*
NET EXTERNAL VEHICLE TRIPS										109	19	24	43	7	1	8

Notes:

[a] Source: Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition* , 2017. Unless otherwise notes, all rates are Peak Hour of Adjacent Street Traffic.

[b] Source: City of Los Angeles' Local Affordable Housing Trip Generation Study (see Appendix B).

[c] The number of daily trips was estimated to be 10 times greater than the total PM peak hour trips.

[d] Internal capture represents the percentage of trips between land uses that occur within the site. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[e] The Walk/Bike credit includes non-auto trips from the surrounding neighborhood. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[f] The number of daily trips was estimated to be 10 times greater than the total PM Peak Hour trips based on the PM Peak Hour of the Generator rate (15.53 trips/ksf).

TABLE 7
CATALINA VILLAGE PROJECT
VEHICLE TRIP GENERATION ESTIMATES - PROJECT SIZE SCREENING OPTION #3

Land Use	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
				AM Peak Hour			PM Peak Hour				AM Peak Hour Trips			PM Peak Hour Trips		
			Daily	Rate	In%	Out%	Rate	In%	Out%	Daily	In	Out	Total	In	Out	Total
PROPOSED PROJECT																
Multifamily Residential (Low-Rise)	220	7 DU	7.32	0.46	23%	77%	0.56	63%	37%	51	1	2	3	3	2	4
Multifamfily Residential (Affordable)	[b]	3 DU	4.16	0.52	38%	62%	0.38	55%	45%	12	1	1	2	1	0	1
Coffee Shop [c]	936	1.12 ksf	364.35	101.14	51%	49%	36.31	50%	50%	408	58	55	113	21	20	41
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	(4)	(2)	(2)	(4)	(1)	(1)	(2)
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	(152)	(23)	(22)	(45)	(6)	(6)	(12)
Net External Coffee Shop										252	33	31	64	14	13	27
Tasting Room [f]	925	0.0 ksf	#DIV/0!	-	-	-	11.36	66%	34%	0	0	0	0	0	0	0
Internal Capture [d]			*1%*					*6%*	*6%*	0	0	0	0	0	0	0
Walk/Bike [d]			*37%*					*29%*	*29%*	0	0	0	0	0	0	0
Net External Tasting Room										0	0	0	0	0	0	0
Total External Vehicle Trips										*316*	*35*	*34*	*69*	*17*	*15*	*32*
EXISTING USE CREDIT																
General Office	710	1.3 ksf	9.74	1.16	86%	14%	1.15	16%	84%	(13)	(2)	0	(2)	0	(1)	(1)
Commercial Retail	820	8.3 ksf	37.75	0.94	62%	38%	3.81	48%	52%	(313)	(5)	(3)	(8)	(15)	(17)	(32)
Internal Capture [d]			*1%*		*3%*	*3%*		*6%*	*6%*	3	0	0	0	1	1	2
Walk/Bike [e]			*37%*		*40%*	*40%*		*29%*	*29%*	116	2	1	3	4	5	9
Net Commercial Retail										(194)	(3)	(2)	(5)	(10)	(11)	(21)
Total Existing Use Credit										*(207)*	*(5)*	*(2)*	*(7)*	*(10)*	*(12)*	*(22)*
NET EXTERNAL VEHICLE TRIPS										109	30	32	62	7	3	10

Notes:

[a] Source: Institute of Transportation Engineers (ITE), *Trip Generation, 10th Edition* , 2017. Unless otherwise notes, all rates are Peak Hour of Adjacent Street Traffic.

[b] Source: City of Los Angeles' Local Affordable Housing Trip Generation Study (see Appendix B).

[c] The number of daily trips was estimated to be 10 times greater than the total PM peak hour trips.

[d] Internal capture represents the percentage of trips between land uses that occur within the site. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[e] The Walk/Bike credit includes non-auto trips from the surrounding neighborhood. This percentage is informed by the Fehr & Peers Mainstreet/MXD+ tool, which uses census data to account for demographic characteristics of the area surrounding the project site, including residential density and local employment.

[f] The number of daily trips was estimated to be 10 times greater than the total PM Peak Hour trips based on the PM Peak Hour of the Generator rate (15.53 trips/ksf).

Conclusions

This memorandum summarizes the analyses that were conducted to estimate the residential VMT associated with the revised project description and identify the project size that would avoid a VMT impact altogether. As described above, although the revised Project would generate less VMT and house fewer residents than the Project as originally proposed, it would still have a significant and unavoidable VMT impact of the same magnitude as the original project description on a per capita basis, even while it would reduce total VMT. Additionally, to avoid a significant VMT impact altogether, the Project would need to be reduced in size such that it would generate a daily total of 110 net external vehicle trips or less. Three project options were proposed that would satisfy this daily vehicle trip threshold. These options would require that the Project either provide the proposed 30 dwelling units and remove the coffee shop and tasting room; provide approximately one-third of the proposed 30 dwelling units and reduce the size of the coffee shop and tasting room, or; provide approximately one-third of the proposed 30 dwelling units, reduce the size of the coffee shop, and remove the tasting room altogether.