



September 6, 2022

Mr. Ali Shabahangi
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101 Larkspur Landing Circle, Suite 220
Larkspur, CA 94939

Draft Focused Transportation Study for the 500 Hopper Street Project

Dear Mr. Shabahangi;

W-Trans has completed a focused analysis of transportation data as requested by the City relative to the proposed mixed-use Residential Care Facility, apartments, and work-live units to be located on Lots 5 and 6 of the Riverfront Master Plan at 500 Hopper Street in the City of Petaluma. The purpose of this letter is to provide a comparison between the trip generation for the project site as estimated in the *Riverfront Mixed-Use Project EIR*, 2012 (EIR) versus the current proposal, address the project's impact on VMT, and determine the parking supply needed for the project.

Project Description

The development of the two parcels at 500 Hopper Street was included in the EIR for the Riverfront project. The proposed use of the project site at that time was for 100 apartments and 30,000 square feet of ground-level commercial space on Lots 5 and 6 of the Riverfront Master Plan. As currently proposed, the site would be developed with 120 apartments and 14 work-live units in Building 1 on Lot 6 and 106 Residential Care Facility for the Elderly (RCFE) units and 6 work-live units in Building 2 on Lot 5. It is noted that the proposed 106 RCFE units are anticipated to accommodate 118 beds and would have up to 30 employees on-site during the largest shift. Further, only RCFE employees or visitors would have vehicles on-site and senior residents would not have vehicles. A tentative parcel map is enclosed for reference.

Trip Generation

Trips associated with the uses as evaluated in the 2014 EIR were estimated using rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 8th Edition, 2008. The trip generations for the uses currently proposed were determined based on standard rates published by ITE in *Trip Generation Manual*, 11th Edition, 2021. Rates for an Assisted Living Facility (LU #254) were applied to the RCFE and Multifamily Housing (Mid-Rise) (LU #221) rates were applied to the apartments. The custom rates for work-live units applied in the EIR were again applied to that type of unit.

As shown in Table 1 the currently proposed uses would be expected to generate an average of 1,051 trip ends per day, including 82 during the morning peak hour and 94 during the evening peak hour. Compared to the trips for the uses as evaluated in the EIR, which are also shown in Table 1, the current proposal would be expected to result in 944 fewer trips per day, with 49 fewer trips during the critical p.m. peak hour. An increase during the a.m. peak hour of only one trip would reasonably be expected to result in no changes to operation compared to the project as originally proposed and approved.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
As Evaluated in the 2012 EIR											
Specialty Retail	30 ksf	44.32	1,330	1.00	30	18	12	2.71	81	36	45
Apartments	100 du	6.65	665	0.51	51	10	41	0.62	62	40	22
Sub-Total Project Site			1,995		81	28	53		143	76	67
Proposed											
RCFE	118 beds	2.60	307	0.18	21	13	8	0.24	28	11	17
Work-Live	20 units	9.95	199	0.86	17	9	8	0.94	19	7	12
Multifamily Housing	120 du	4.54	545	0.37	44	10	34	0.39	47	29	18
Sub-Total Proposed			1,051		82	32	50		94	47	47
Net Difference			-944		1	4	-3		-49	-29	-20

Note: ksf = 1,000 square feet; du = dwelling unit; RCFE = Residential Care Facility for the Elderly

Vehicle Miles Traveled (VMT)

The City of Petaluma adopted thresholds of significance for VMT in June 2021. Based on the City of Petaluma's *Senate Bill 743 Vehicle Miles Traveled Implementation Guidelines*, Fehr & Peers, July 2021, the applicable VMT performance metric for employee-based projects is based on the nine-county Bay Area's average of 22.7 VMT per employee while for residential projects it is based on the citywide average of 19.3 VMT per capita. Projects generating vehicle travel that is 16.8 percent or more below the regional or citywide average, which are 18.9 VMT per employee and 16.1 VMT per resident, would be considered to have a less-than-significant transportation impact.

The SCTM19 travel demand model operated by the Sonoma County Transportation Authority includes VMT projections for traffic analysis zones (TAZ) throughout the County. The proposed project is located in TAZ 888 and has a projected home-based VMT per employee of 7.9 miles and home-based VMT per resident of 12.6 miles. These values fall below the City's significance thresholds, indicating that the project would have a less-than-significant VMT impact. A summary of the VMT findings is shown in Table 2.

Table 2 – Vehicle Miles Traveled Analysis Summary

VMT Metric	Baseline VMT Rate (Citywide/ Regional Avg)	VMT Threshold (16.8% Below Citywide/ Regional Avg)	Project VMT	
			VMT per Capita/ VMT per Employee (TAZ 888)	Below Threshold?
VMT per Capita	19.3	16.1	12.6	Yes
VMT per Employee	22.7	18.9	7.9	Yes

Notes: VMT Rate is measured in home-based commute VMT per Employee or per Capita; TAZ=Traffic Analysis Zone

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient to meet City requirements and the anticipated parking demand. The parking analysis was conducted for each building separately to reflect the demand for each parcel individually. The proposed project would provide 103 parking spaces for Building 1 on Lot 6 and 32 parking spaces for Building 2 on Lot 5 using stacked and standard parking. Additionally, as the City's SmartCode section 6.10.010 states that on-street parking along the site's frontage shall count towards the requirements, 12 on-street parking spaces along the frontage of Building 1 and 10 on-street parking spaces along Building 2's frontage on Caulfield Lane (also known as Central Green Area) were counted towards the proposed parking supply, resulting in a supply of 115 parking spaces for Building 1 and 42 parking spaces for Building 2.

City Parking Requirements

As the project site is located within the Central Petaluma Specific Plan area, the parking requirements were calculated based on the SmartCode, which includes development regulations for the land uses within each Transect Zone. The project site is in the T-6 Urban Core zone, which requires parking at a rate of one space per market-rate residential unit, including work-live units, and two parking spaces per 1,000 square feet of floor space for all the other land uses. These rates translate to a total of 237 parking spaces (134 spaces for Building 1 and 103 spaces for Building 2), which is more than the proposed supply.

It is noted that because the SmartCode does not include a specific parking rate for senior housing or residential care facilities, a parking rate for "all the other land uses (other than residential and lodging land use)" was applied to the proposed RCFE. However, as this parking rate is primarily intended for retail and office uses, the number of parking spaces that would be required for the RCFE was calculated to be much higher than the anticipated parking demand; as noted in the Project Description, only employee and visitor parking would be needed for the RCFE since senior residents would not have vehicles on-site. This is consistent with Section 11.065 of the City's Municipal Code, which states that the number of required parking spaces may be modified for uses such as elderly housing or retirement homes where it can be demonstrated that automobile use or ownership is significantly lower than for other dwelling or lodging houses. Therefore, parking demand was estimated for all the proposed land uses to better reflect the project conditions.

Parking Demand

ITE Unshared Parking Demand

Parking demand was estimated using average peak parking demand rates published by ITE in *Parking Generation*, 5th Edition, 2019 for "Nursing Home" (LU #620) and "Multifamily Housing (Mid-Rise)" (LU #221). The "Nursing Home" land use was chosen to estimate the parking demand for RCFE as the project residents would not own vehicles, consistent with the ITE land use description; the "Assisted Living" land use was also considered but was determined to be incompatible as this land use includes a range of residential care facilities including independent living units where the residents are able to drive. Additionally, because the "work-live" land use is not included in the ITE *Parking Generation*, the parking demand rate from the City of Emeryville's Municipal Code Section 9-4.404: Calculation of Estimated Parking Demand, was used as it is one of the only locally established rates for work-live units.

Based on application of the selected parking demand rates, the expected parking demand is 134 spaces for Building 1 and 29 spaces for Building 2, for a total of 163 spaces. The total proposed parking supply of 157

spaces would be six spaces short of the anticipated parking demand. Further, the parking analysis for each building indicated that the parking supply for Building 1 would be short by 19 spaces while the supply for Building 2 would have a surplus of 13 parking spaces.

The required parking supply per City code and ITE parking demand estimates are summarized in Table 3.

Table 3 – Vehicle Parking Summary			
Land Use	Units	Rate	Parking Spaces
City Required Parking (SmartCode)			
<i>Building 1</i>			
Multifamily Housing	120 du	1 space/du	120
Work-Live	14 du	1 space/du	14
<i>Building 1- City Required Parking Total</i>			134
<i>Building 2</i>			
Residential Care	48,350 sf	2 space/1,000 sf*	97
Work-Live	6 du	1 space/du	6
<i>Building 2- City Required Parking Total</i>			103
<i>City Required Parking Total</i>			
			237
ITE Parking Demand Estimate			
<i>Building 1</i>			
Multifamily Housing	150 bedrooms	0.75/bedroom	113
Work-Live**	14 du	1.5 spaces/du	21
<i>Building 1- ITE Parking Demand Estimate Total</i>			134
<i>Building 2</i>			
Nursing Home	30 employees	0.67/employee	20
Work-Live**	6 du	1.5 spaces/du	9
<i>Building 2 - ITE Parking Demand Estimate Total</i>			29
<i>ITE Parking Demand Estimate Total</i>			
			163
Parking Supply Proposed			
Building 1 (Lot 6)	115 (103 on-site and 12 on-street parking spaces)		
Building 2 (Lot 5)	42 (32 on-site and 10 on-street parking spaces)		
<i>Total Parking Supply Proposed</i>	157 (135 on-site and 22 on-street parking spaces)		

Notes: sf = square feet; du = dwelling unit; *this City parking rate is primarily for retail and office uses and not appropriate for application to the residential care facility; **As *Parking Generation* does not include a work-live land use, the parking demand rate is derived from the City of Emeryville's Municipal Code

ITE Shared Parking Demand

As the proposed parking supply for Building 1 would have a deficit of 19 parking spaces to accommodate the anticipated parking demand, surrounding on-street parking spaces were reviewed to determine if there is available supply to accommodate an additional 19 vehicles. This approach is consistent with Section 6.10.030.E.1 of the SmartCode, which states that off-site parking shall be located within 1,250 feet of walking distance of the site. However, based on a review of the project vicinity, only on-street parking within 300 feet of the project site was counted given that the SMART rail tracks and US 101 act as barriers to walking, and there is limited on-street parking available beyond 300 feet. Based on inspection of aerial imagery, there is a total of 63 on-street parking spaces within 300 feet of the project site, including 43 parking spaces on the west of the project site and 20 parking spaces on the north of the project site.

Because the selected on-street parking spaces are expected to be shared with the surrounding land uses, including the existing Marriott Hotel with 122 rooms, the proposed office with 41,751 square feet of building space, and the 2.22 acres of an active park currently in development, a shared parking demand analysis of the Marriott Hotel Parking Lot was performed to determine if peak parking demand could be accommodated in its off-street lot and whether excess demand would “spill over” into the on-street spaces. The existing Marriott Hotel parking lot with 180 parking spaces will be shared with the office building proposed on the same lot as well as the active park on the south of the hotel due to the public parking easement that requires the Marriott Hotel to provide a maximum of 20 parking spaces on weekdays and 36 parking spaces on weekends to accommodate park visitor vehicles. The tentative parcel map with a markup that indicates the location of the surrounding land uses and selected on-street parking spaces is enclosed.

The shared parking analysis was based on the methodology from ITE's *Parking Generation*, which focuses on temporal data to determine when the overall peak demand for various land uses occurs, including time of day and day of the week. The parking demand analysis also considers the proposed mix of land uses, including the intensities of each type of use. The ITE land uses applied include “Hotel” (LU #310), “Soccer Complex” (LU #488), and “General Office Building” (LU #710); as ITE does not have a weekday hourly demand distribution for the Soccer Complex land use, the weekday hourly distribution for “Athletic Club” (LU #493) was used instead. Based on the analysis, the average peak parking demand was estimated to be 207 vehicles during the weekday peak hour and 181 vehicles during the Saturday peak hour; the peak hour would occur between 10:00 a.m. and 11:00 a.m. on weekdays and 1:00 p.m. to 2:00 p.m. on Saturdays. A summary of the shared parking demand is shown in Table 4.

Table 4 – Shared Parking Demand Analysis – Marriott Hotel

Land Use	Peak Weekday Demand	Peak Saturday Demand
	10:00 a.m.	1:00 p.m.
Marriott Hotel	88	109
General Office	100	10
Active Park	19	62
<i>Shared Parking Demand Total</i>	<i>207</i>	<i>181</i>
<i>Marriott Hotel Total Parking Supply</i>	<i>180</i>	
<i>Spillover into On-Street Parking</i>	<i>27</i>	<i>26</i>

The parking supply of 180 spaces for the Marriott Hotel would not be adequate to accommodate the weekday or Saturday peak parking demand of 207 and 181 vehicles, respectively, and would result in a spillover of 27 vehicles on weekdays and 26 vehicles on Saturday into on-street spaces. The 26-vehicle spillover on Saturday is due to only 36 of the park's 62 vehicles being accommodated in the Marriott Parking lot easement. The 63 on-street parking spaces near the project site would be more than adequate to accommodate the spillover of 46 vehicles during the weekdays (19 vehicles from the project and 27 vehicles from the surrounding uses) and 45 vehicles during the weekends (19 vehicles from the project and 26 vehicles from the surrounding uses). Therefore, it is reasonable to conclude that there would be sufficient on-street parking spaces to accommodate the additional 19 parking spaces needed for Building 1.

It should be noted that the use of peak parking demands for the project and surrounding land uses is considered a conservative approach as the peak parking demand for each land use do not occur at the same time. Based on data from *Parking Generation*, the peak parking demand period for the multifamily housing proposed in Building 1 would occur between 12:00 a.m. to 4:00 a.m. on both weekdays and weekends when most residents are likely to be home. During this peak parking period, there would be no spillover from the surrounding land uses as the parking demand for the hotel is 84 vehicles on weekday and 104 vehicles on weekend, which is fewer than the parking supply of 180 spaces, and there would be no parking demand for the office and active park. Therefore, there would only be spillover of 19 spaces from Building 1 during this period, assuming that live-work units have the same parking demand at night as the multifamily housing.

Similarly, the parking demand for the multifamily housing is 54 percent and 66 percent of the peak parking demand during the surrounding land uses' weekday peak hour between 10:00 a.m. and 11:00 a.m. and Saturday peak parking demand hour between 1:00 p.m. to 2:00 p.m., respectively. Assuming that work-live units would have the same parking demand distribution as an office (100 percent) on weekdays and a residential development on Saturday (77 percent), these percentages translate to parking demand of 82 vehicles on weekdays and 88 vehicles on weekends, which are fewer than the proposed parking supply for Building 1 and no spillover from the project is expected during these hours. Therefore, although the conservative approach of combining the peak parking demand for the project and surrounding land uses resulted in the maximum spillover of 46 vehicles to the on-street parking spaces, it is expected that there would actually be less spillover than the calculated 46 vehicles as the peak parking demand periods for each land use occur at different times of the day.

Conclusions

- The project is expected to generate an average of 1,051 daily trips, including 82 trips during the morning peak hour and 94 evening peak hour trips. Compared to the trips for the land uses as evaluated in the EIR, the current project would be expected to result in 944 fewer daily trips, with one more morning peak hour trip and 49 fewer trips during the p.m. peak hour.
- The project is expected to result in a less-than-significant impact on VMT based on the City's VMT guidelines.
- The proposed parking supply of 157 spaces would be insufficient to meet the City requirements of 237 parking spaces or the total anticipated demand of 163 parking spaces. However, if each proposed building is analyzed individually, Building 1 would have a 19 space deficit and Building 2 would have a surplus of 13 spaces.
- Based on the conservative shared parking demand analysis, it was determined that 63 on-street parking spaces near the project site would be adequate to accommodate the anticipated spillover of 46 vehicles during on weekdays and 45 vehicles on the weekend. However, as the peak parking demand for the project and surrounding land uses do not occur at the same time, it is expected that in practice there would be less spillover to on-street parking spaces than calculated.

We hope this information is adequate to address any concerns regarding the project's potential transportation impacts. Thank you for giving us the opportunity to provide these services.

Sincerely,

Jade Kim
Assistant Planner

Brian Canepa, TDM-CP
Principal

Dalene J. Whitlock, PE, PTOE
Senior Principal

Enclosure: Tentative Parcel Map, Tentative Parcel Map with Markup

DJW/bc-jk/PET226.L1

