APPENDIX 2.7-2

VMT Evaluation

MEMORANDUM

To:	Mr. Jonathan Frankel New Urban West, Incorporated	Date:	May 19, 2017
From:	Chris Mendiara LLG, Engineers	LLG Ref:	3-16-2614
Subject:	Villages VMT Evaluation		

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Linscott, Law & Greenspan, Engineers (LLG) has prepared this memorandum addressing vehicle miles traveled ("VMT") associated with the proposed Village Specific Plan (herein referred to as the "Project"). The Project site is located in the northwest portion of the City of Escondido (City), along both sides of West Country Club Lane west of Nutmeg Street. The Project site is approximately one-half mile east of I-15, about two miles north of State Route 78 (SR-78). The 109-acre Project site is a former 18-hole golf course. There are approximately 1,800 existing homes within 500 feet of the Project boundary.

The Project

The proposed Specific Plan would provide for the construction of 392 single family homes in three villages, as well as community amenities that will be available to both residents of the Project and the public at large. Community amenities open to both the public and future Project residents (HOA members) include a restaurant, bar, convenience market, trail system, parks, greenbelt, and banquet facility (with paid reservation). The 46-acres of open space that are part of the Project would consist of 32 acres of landscaped greenbelt with a series of parks, along an approximately 4-mile-long walking trail system. Facilities accessible via HOA membership include the pool, gym, village green (events lawn), and community HOA room. These additional features are considered "smart growth" elements as they seek to provide a mix of commercial and recreational uses within the larger residential community that are intended to reduce trip length and frequency.

To further facilitate pedestrian circulation, the Project also proposes a Specific Alignment Plan (SAP) for Country Club Lane from Golden Circle Drive to Nutmeg Street. The SAP would provide a series of intersection improvements designed to calm traffic speeds and enhance pedestrian and bicycle circulation. Proposed improvements include the provision of roundabouts at Golden Circle Drive and La Brea Street, and intersection enhancements at Firestone Drive (all-way stop control with pedestrian crosswalks and curb bulbouts). Traffic signals with pedestrian crosswalks are proposed at Gary Lane and Nutmeg Street. Narrowed lanes and buffered bike lanes are also proposed to calm traffic speeds and provide an enhanced multi-modal experience, while fulfilling the City's Bicycle Master Plan design for Country Club Lane. These SAP features are considered "complete streets" elements as they provide substantial enhancements to the overall pedestrian and bicycle circulation network, which are, in turn, are intended to encourage increased multi-modal trips in lieu of driving trips.

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Analysis

The analysis presented here evaluates the VMT in the future forecast year with the Project, under scenarios both without and with the VMT-reducing mixed-use amenities and SAP enhancements proposed by the Project. The daily VMT were estimated using the CalEEMod (Version 2016.3.1) default values for each land-use type. (See, Green House Gas analysis (Dudek, 2017).) The average weekday trip rates were taken from the Traffic Impact Study (LLG, 2017). Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic.

The Project's proposed land uses and density are consistent with the surrounding land uses. The location, density, and intensity of suburban-style development within the surrounding communities have mainly developed through planned residential development, and are generally characterized by low density single-family neighborhoods with pockets of medium density single-family development (duplex units, townhomes and detached homes on smaller lots). Given that the Project's land use type (i.e., primarily residential) and size are similar to the surrounding community, it is expected that the driving characteristics of Project residents would be similar as well. The type, amount, length and frequency of vehicle trips to work, school, shopping, and recreation generally would be similar to the surrounding community, which would result in a comparable residential Project VMT for the residential uses absent the Project's diversity of land uses and SAP.

However, because the Project adds community serving retail and recreational opportunities, along with substantial enhancements to the bicycle and pedestrian circulation network, this combination of mixed-uses, along with the multi-modal enhancements, would ultimately reduce the Project's overall VMT as compared to other residential developments in the vicinity without these features.

As discussed above, the Project would include community-serving commercial and recreational facilities, which would reduce not just Project VMT, but are also expected to reduce existing community-wide VMT. This is because local residents would have restaurant and retail uses available in their community, not previously available, that would be accessible via non-vehicular modes of transportation, encouraged by the Project's proposed pedestrian and bicycle enhancements. Implementation of the SAP for Country Club Lane would reduce speeds, improving both the pedestrian and bicycle experience. The proposed buffered Class II bike lanes also would provide a high level of comfort for cyclists, and the intersection improvements (stop/signal control, cross walks, bulbouts) proposed at Gary Lane, Firestone Drive and Nutmeg Street would work in conjunction with the proposed trails to encourage and facilitate pedestrian circulation along the corridor.

While the residential component of the Project is similar in density and scale to the surrounding residential land uses (3.6 dwelling units/acre vs. 4.6 dwelling units/acre, respectively), the Project's residential VMT is expected to be lower than the surrounding communities. Moreover, based on our professional judgment and experience, the Project amenities also are expected to result in a lower community-wide VMT due to the community-serving amenities and multi-modal enhancements, which would serve to reduce both Project VMT and community-wide VMT.

Table 1 shows the overall reduction in Project VMT expected to result with implementation of the Project's VMT reduction features, as identified in the GHG study.

TABLE 1
VEHICLE MILES TRAVELED COMPARISON
PROJECT WITHOUT AND WITH VMT REDUCTION FEATURES

Scenario	Annual Vehicle Miles Traveled (mi)
Project without VMT Reduction Features	11,507,389.5
Project with VMT Reduction Features	10,932,020.1
Difference with Reduction Features	*(575,369.4)*

Source:

1. Green House Gas analysis (Dudek, 2017)

Conclusions

Table 1 shows that the enhancements proposed by the overall Project development would result in a reduction of 575,369.4 annual vehicle miles traveled. This represents a reduction of approximately 5% compared to the VMT that would be generated without the VMT reduction strategies incorporated into the Project.

As to the Project's effect on surrounding VMT, the City of Escondido recognizes that "…smart growth land use patterns and instituting complete streets plays a direct role in the rate and growth of vehicle miles traveled" (*General Plan Mobility Element, Section C*) The Project proposes both of these strategies.

The California Air Pollution Control Officers Association's (CAPCOA) publishes the report *Quantifying Greenhouse Gas Mitigation Measures*, which is a tool used by air quality analysts to evaluate the effects of various strategies to reduce VMT in existing

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or future conditions. The Project's land use mix of retail and residential uses is considered a smart-growth pattern, and CAPCOA's document states that an "increase in diversity of urban and suburban developments (mixed use)" and the provision of "traffic calming measures" for existing and proposed development, could result in a potential reduction in VMT in the range of 9-31%. ***Attachment A*** contains the CAPCOA data.

In conclusion, the Project's land use diversity and traffic calming measures are expected to result in reduced VMT for both the Project and the adjacent existing community.

cc: File

Attachment Attachment A: CAPCOA Transportation Strategies Excerpt

Table 6-2: Transportation Category

Transportation						
Category	Measure Number	Strategy	BMP	Grouped With #	Range of Effectiveness	
					Percent Reduction in GHG Emissions	Basis
Land Use / Location	LUT-1	Increase Density			1.5-30.0%	VMT
	LUT-2	Increase Location Efficiency			10-65%	VMT
	LUT-3	Increase Diversity of Urban and Suburban Developments (Mixed Use)			9-30%	VMT
	LUT-4	Incr. Destination Accessibility			6.7-20%	VMT
	LUT-5	Increase Transit Accessibility			0.5-24.6%	VMT
	LUT-6	Integrate Affordable and Below Market Rate Housing			0.04-1.20%	VMT
	LUT-7	Orient Project Toward Non-Auto Corridor			NA	
	LUT-8	Locate Project near Bike Path/Bike Lane			NA	
	LUT-9	Improve Design of Development			3.0-21.3%	VMT
Neighborhood / Site Design	SDT-1	Provide Pedestrian Network Improvements			0-2%	VMT
	SDT-2	Traffic Calming Measures			0.25-1.00%	VMT
	SDT-3	Implement a Neighborhood Electric Vehicle (NEV) Network			0.5-12.7%	VMT
	SDT-4	Urban Non-Motorized Zones		SDT-1	NA	
	SDT-5	Incorporate Bike Lane Street Design (on-site)		LUT-9	NA	
	SDT-6	Provide Bike Parking in Non-Residential Projects		LUT-9	NA	
	SDT-7	Provide Bike Parking in Multi-Unit Residential Projects		LUT-9	NA	
	SDT-8	Provide EV Parking		SDT-3	NA	
	SDT-9	Dedicate Land for Bike Trails		LUT-9	NA	
Parking Policy / Pricing	PDT-1	Limit Parking Supply			5-12.5%	
	PDT-2	Unbundle Parking Costs from Property Cost			2.6-13%	
	PDT-3	Implement Market Price Public Parking (On-Street)			2.8-5.5%	
	PDT-4	Require Residential Area Parking Permits		PDT-1, 2 & 3	NA	