

December 23, 2020

Mr. Brian Hardy
Richland
3161 Michelson Drive, Suite 425
Irvine, CA 92612

SUBJECT: STONERIDGE COMMERCE CENTER SPECIFIC PLAN (SP No. 239, A1) VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Mr. Brian Hardy:

The following vehicle miles traveled (VMT) analysis has been prepared for the proposed Stoneridge Commerce Center Specific Plan (SP No. 239, A1) (**Project**), which is located on a 582.6 acre site west of Lakeview Avenue between Ramona Expressway and Nuevo Road in the County of Riverside.

PROJECT OVERVIEW

The Project is proposing to amend the Specific Plan with a mix of industrial and commercial uses, as described below and shown in Table 1-1:

1. Without Mid-County Parkway (MCP) or Proposed Project Land Use: 8,476,776 square feet of light industrial uses, 1,069,398 square feet of business park uses, and 121,968 square feet of commercial retail uses
2. With MCP or Alternative Project Land Use: 8,476,776 square feet of light industrial uses, 936,540 square feet of business park uses, 126,542 square feet of commercial retail uses

The Riverside County Transportation Commission (RCTC) is currently planning the construction of a regional, grade-separated transportation facility referred to as the MCP between the I-215 Freeway (at Placentia Avenue) and SR-79. The MCP is a long-range transportation improvement as RCTC has not yet identified or secured funding of the MCP and the future proposed interchanges. As such, timing of the future MCP is currently unknown.

A portion of the MCP and future interchange is planned in the northwestern portion of the site, which would affect the development proposed within Planning Areas 6, 7, and 8A of the proposed Project. In order to accommodate both the potential for the future construction of the MCP while also providing for development of the site in the event that the MCP is not constructed as currently planned, two land use concept plans have been developed for the site (Without and With MCP). For the purposes of this VMT analysis the maximum allowable square footage, as permitted by the Specific Plan, will be evaluated for each of the land use designations below, as presented in Table 1-1.

TABLE 1-1: PROJECT LAND USE SUMMARY TABLE

Planning Area	Land Use Designation	Without Mid-County Parkway		With Mid-County Parkway	
		Acres	Maximum Building Square Footage	Acres	Maximum Building Square Footage
1	Light Industrial	37.8	823,284	37.8	823,284
2	Light Industrial	114.6	2,495,988	114.6	2,495,988
3	Light Industrial	195.2	4,251,456	195.2	4,251,456
4	Light Industrial	37.8	823,284	37.8	823,284
5	Light Industrial	3.8	82,764	3.8	82,764
Light Industrial Subtotal		389.2	8,476,776	389.2	8,476,776
6	Business Park	34.4	749,232	28.3	616,374
7	Business Park	14.7	320,166	14.7	320,166
Business Park Subtotal		49.1	1,069,398	43.0	936,540
8A	Commercial Retail	6.8	103,673	7.2	109,771
8B	Commercial Retail	1.2	18,295	1.1	16,771
Commercial Retail Subtotal		8.0	121,968	8.3	126,542
9	Open Space-Conservation	17.4	N/A	17.4	N/A
Open Space-Conservation Subtotal		17.4	N/A	17.4	N/A
10	Open Space-Conservation Habitat	47.0	N/A	47.0	N/A
11	Open Space-Conservation Habitat	34.6	N/A	34.6	N/A
Open Space-Conservation Habitat Subtotal		81.6	N/A	81.6	N/A
--	Circulation	37.3	N/A	34.4	N/A
TOTAL		582.6	9,668,142	573.9	9,539,858

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor’s Office of Planning and Research (OPR) released a [Technical Advisory on Evaluating Transportation Impacts in CEQA](#) (December of 2018) (**Technical Advisory**). (1) Based on OPR’s Technical Advisory, the County of Riverside has adopted their [Transportation Analysis Preparation Guide](#) (**County Guidelines**). (2) This analysis has been prepared based on the County’s Guidelines.

VMT ANALYSIS METHODOLOGY

As outlined in the County Guidelines, mixed-use projects should evaluate each land use component of the project separately and apply the relevant significance threshold for each land use type (i.e., office,

retail, etc.). For the purposes of this VMT analysis, the evaluation of VMT will be separated into two assessments, one to focus on the employment uses (i.e., light industrial and business park uses) and a separate assessment of the Project's retail component.

PROJECT SCREENING

Consistent with County Guidelines, projects should evaluate available screening criteria based on their location and project type to determine if a presumption of a less than significant transportation impact can be made. The following project screening thresholds were selected for review base on their applicability to the proposed Project:

- Small Projects Screening
- High Quality Transit Areas (HQTA) Screening
- Map-Based Screening
- Local-Serving Retail Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

SMALL PROJECTS SCREENING

The County Guidelines identify that projects that generate fewer than 110 daily vehicle trips are presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, small projects anticipated to generate low traffic volumes and by association greenhouse gas (GHG) emissions less than 3,000 Metric Tons of Carbon Dioxide Equivalent (MTCO_{2e}) per year are also assumed to cause a less than significant transportation impact. Based on information contained in the Project's LOS based traffic study (3), the Project is forecast to generate significantly more than 110 daily vehicle trips and would not be eligible to screen out based on project type screening.

The Small Projects screening threshold is not met.

HIGH QUALITY TRANSIT AREAS (HQTA) SCREENING

Projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"¹ or an existing stop along a "high-quality transit corridor"²) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

¹ Pub. Resources Code, § 21064.3 ("Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

² Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The Project is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

The HQTAs screening threshold is not met.

MAP-BASED SCREENING

The Technical Advisory notes that “residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT.”³ County Guidelines also note that the use of map-based screening for low VMT generating areas is also applicable for other employment uses such as the Project’s light industrial and business park development. Urban Crossroads has obtained a map from County staff that identifies VMT for the traffic analysis zone (TAZ) that contains the Project. The map utilizes the sub-regional Riverside Transportation Analysis Model (RIVTAM) to measure current VMT performance within individual TAZ’s and compares them to the applicable impact threshold (e.g., VMT per employee for office or industrial land uses and VMT per capita for residential land uses). As shown in Attachment A, a portion of the Project appears to be located within a TAZ that is below the County’s threshold of 14.2 VMT per employee. However, the underlying land use assumptions for the TAZ within the RIVTAM base year (2012) model indicates nominal levels of employment (6 total employees), which would not be consistent with the Project’s proposed land use.

The Map-Based screening threshold is not met.

LOCAL-SERVING RETAIL SCREENING

As noted in the County Guidelines, local-serving retail has been determined to reduce VMT by shortening trips. The Project is presumed to cause a less than significant impact if no single store on-site exceeds 50,000 square and is deemed local serving. Although no formal development plan for the retail component is proposed at this time, the Project would allow up to 126,542 square feet of retail use. Therefore, this analysis will conservatively assume that the retail component does not screen out, and would require analysis consistent with County Guidelines.

The Local-Serving Retail screening threshold is not met.

³ Page 12 of the Technical Advisory

PROJECT GENERATED VMT

As the Project was not found to qualify for a less than significant transportation impact based on VMT screening criteria, a project level VMT analysis has been prepared.

RIVTAM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment. RIVTAM is a travel forecasting model that represents a sub-area (Riverside County) of the Southern California Association of Governments (SCAG) regional traffic model. RIVTAM was designed to provide a greater level of detail and sensitivity in the Riverside County area as compared to the regional SCAG model. County Guidelines identifies RIVTAM as the appropriate tool for conducting VMT modeling for land use projects within the County of Riverside.

Project VMT has been calculated using the most current version of RIVTAM. Adjustments in socio-economic data (SED) (i.e., employment) have been made to a separate traffic analysis zones (TAZs) within the RIVTAM model to reflect the Project's proposed land uses (i.e., light industrial, business park, and retail). Since the retail land use will be evaluated separately from the light industrial and business park land uses, two separate TAZs were utilized to model the Project, which allows for the ability to isolate the VMT generated by each component of the Project from other land use in the model.

Table 1 summarizes the employment estimates for the Project. It should be noted that the employment estimates were provided by the project team and are consistent with those used by the Project's Draft Environmental Impact Report (DEIR).

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Building Area	Building Area per Employee	Estimated Employees ⁴
Light Industrial	8,476,776 s.f.	1,030 s.f.	8,230
Business Park	1,069,398 s.f.	600 s.f.	1,782
Commercial Retail	121,968 s.f.	500 s.f.	244
Total:	9,668,142 s.f.	--	10,256

PROJECT LIGHT INDUSTRIAL & BUSINESS PARK VMT ASSESSMENT

Adjustments to employment for the Project's TAZ were made to the RIVTAM base year model. Project-generated home-based work VMT was then calculated following the VMT calculation procedures identified in Appendix E of the County Guidelines and includes home-based work trips that are both internal and external to the RIVTAM model boundaries. The home-based work VMT value is then normalized by dividing by the number of Project employees. As shown in Table 2, the Project generated

⁴ Draft Environmental Impact Report (June 2020)

VMT per employee is 19.30.

TABLE 2: PROJECT HBW VMT PER EMPLOYEE

	Project
Industrial Employment	10,012
HBW VMT	193,232
HBW VMT per Employee ⁵	19.30

The County Guidelines state that Work VMT per employee that exceeds the existing county-wide average Work VMT per employee (i.e., County threshold) may result in a significant transportation impact. The existing county-wide average VMT per employee is 14.24 for office and industrial uses.⁶ Table 3 provides a comparison of the project generated VMT per employee as compared to the County’s threshold.

TABLE 3: PROJECT VMT PER EMPLOYEE COMPARISON

	Base Year
County Threshold	14.24
Project VMT per Employee	19.30
Percent Change	+26.22%
Potentially Significant?	Yes

As shown in Table 3, the Project generated Work VMT per employee would exceed the County’s adopted threshold by 26.22 percent. The transportation impact based on the assessment of Project generated VMT as compared to the County’s adopted threshold is potentially significant.

PROJECT RETAIL VMT ASSESSMENT

Consistent with County Guidelines, it is appropriate to measure the net regional change in VMT related to the implementation of a retail land use project using the entire Riverside County area as the regional boundary. A net increase in regional total VMT is identified as the County’s adopted impact threshold for retail land uses (see Figure 6 – VMT Threshold of Significance of the County Guidelines).

To make this assessment, total link-level VMT was extracted from the “with Project” model runs for the base year (2012) and cumulative year (2040) RIVTAM models. This calculation is commonly referred to as “boundary method” and includes the total VMT for all vehicle trips with one or both trip ends within a specific geographic area.

As shown in Table 4, there is a net regional increase in total VMT for base year (2012) and a net decrease in total VMT for cumulative year (2040). This finding would seem intuitive as the RIVTAM base year (2012) model includes sparse levels of development in the Project’s vicinity, which results in longer trips

⁵ HBW VMT/Worker is a measure of all auto trips between home and work and does not include heavy duty truck trips or freight, which is consistent with OPR direction and Riverside County VMT calculation guidelines.

⁶ County Guidelines: Figure 6 – VMT Threshold of Significance.

for customers of the shopping center to travel to the proposed retail shopping component. Conversely, the cumulative (2040) model includes increases in residential development within the region and in the vicinity of the proposed retail component, thereby providing future residential communities more efficient options for retail trip purposes.

TABLE 4: RIVERSIDE COUNTY VMT PER SERVICE POPULATION

	Base Year (2012)	Cumulative (2040)
VMT Without Project	53,661,883	92,640,327
VMT With Project	53,686,355	92,580,741
Change	24,472	-59,585
Net Increase?	Yes	No

POTENTIAL VMT REDUCTION STRATEGIES

Projects that exceed VMT threshold(s) are required to mitigate to the extent feasible its transportation impact. VMT reduction strategies for large projects and specific plans may include altering a project's density, land use mix, site design, and availability of transit, bicycle, and pedestrian facilities. For smaller individual development projects, VMT may be reduced through the use of transportation demand management (TDM) strategies.⁷

The Project's VMT reduction strategies as the specific plan level should include the following:

- Provide pedestrian and bicycle network improvements within the development connecting to existing off-site facilities at Antelope Road, Orange Avenue, and Street A.
- Where applicable ensure design of key intersections and roadways encourage the use of walking, biking and transit.
- Collaborate with the Riverside Transit Authority (RTA) to determine the feasibility of providing new or re-route existing transit services to the site.

In addition, TDM strategies that may be applicable at the implementing project level may include:

- Reduce Parking Supply
- Transit Rerouting and Transit Stops
- Commute trip reduction (CTR) programs offered by individual building tenants that would encourage the use of vanpools, carpooling, public transit, and biking.
- CTR programs may also provide for alternative work or compressed work schedules to reduce the number of days an employee commutes to work.
- Provision of on-site facilities to provide end of trip services for bicycling such as secure bike parking, storage lockers and showering facilities.

⁷ County Guidelines; page 25.

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CONCLUSION

In summary, project generated VMT per employee was found to exceed the existing county-wide average VMT per employee threshold by 26.22%. The Project will provide feasible VMT reduction measures at the specific plan level such as those described above, however, inclusion of such VMT reduction measures in areas that are characteristically suburban⁸ in context are limited to a maximum VMT reduction of 15%.⁹ This maximum reduction for cross-category transportation-related mitigation measures of 15% for suburban settings is also noted in the County Guidelines. Therefore, even with the implementation of all feasible VMT reduction measures, project generated VMT cannot be reduced to a level of less than significant.

If you have any questions, please contact me directly at aevatt@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.



Aric Evatt, PTP
President



Robert Vu, PE
Transportation Engineer

⁸ Suburban: A project characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside of the central city (a suburb).

⁹ California Air Pollution Control Officers Association: "Quantifying Greenhouse Gas Mitigation Measures" August 2010; page 55.

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REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **County of Riverside.** *Transportation Analyss Guidelines for Lovel of Service Vehicle Miles Traveled.* County of Riverside : s.n., December 2020.
3. **Urban Crossroads, Inc.** *Stoneridge Commerce Center Specific Plan (SP No. 239, A1).* June 2020.

ATTACHMENT A
MAP-BASED VMT SCREENING RESULTS

0 1,100 2,200 4,400 Feet
 1 inch = 2,100 Feet
 Orthophotography from 2016
 Printed by KVIS/AMG on 12/22/2020

SP00239A01 (Stoneridge) VMT Map-Based Screening

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