Analyzing Vehicle Miles Traveled for CEQA Compliance

SB 743 IMPLEMENTATION GUIDELINES FOR THE COUNTY OF SANTA CRUZ

Implemented July 2020
Updated May 2021
Updated December 2024
Updated May 2025
Updated July 2025

County of Santa Cruz Community Development and Infrastructure

Background

In 2013, Senate Bill (SB) 743 was signed into law by California Governor Jerry Brown with a goal of reducing greenhouse gas (GHG) emissions, which promotes urban infill projects supporting diverse land uses and multimodal transportation networks. One significant outcome resulting from this statute is the removal of automobile delay and congestion, commonly known as level of service (LOS), as a basis for determining significant transportation impacts under the California Environmental Quality Act (CEQA).

The Governor's Office of Planning and Research (OPR) selected Vehicle Miles Traveled (VMT) as the principal measure to replace LOS for determining significant transportation impacts. VMT is a measure of total vehicular travel that accounts for the number of vehicle trips and the length of those trips. OPR selected VMT, in part, because jurisdictions are already familiar with this metric. VMT is already used in CEQA to study other potential impacts such as GHG, air quality, and energy impacts and is used in planning for regional Sustainable Communities Strategies (SCS).

VMT also allows for an analysis of a project's impact throughout the jurisdiction rather than only in the vicinity of the proposed project allowing for a better understanding of the full extent of a project's transportation-related impact. However, SB 743 does not restrict the County of Santa Cruz from using LOS for other planning purposes outside the scope of CEQA.

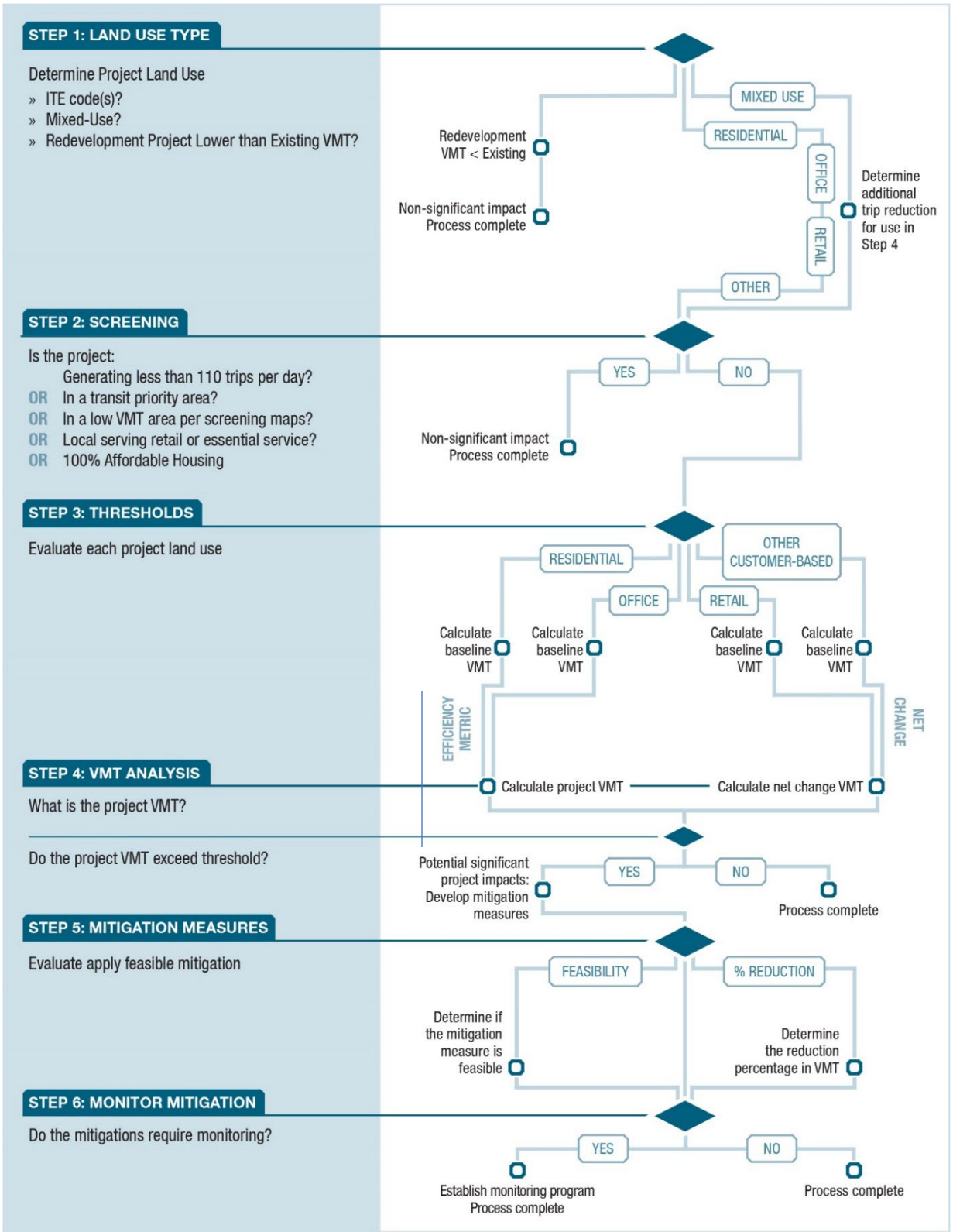
Use of this Document

These Guidelines establish the VMT threshold adopted by the County and provide an approach to identifying transportation impacts under CEQA for land use and transportation projects. These Guidelines closely align with guidance provided within the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018). While the OPR guidance related to SB 743 has been a helpful introduction to using VMT to evaluate projects, it does not provide a complete solution. More details for how to evaluate projects in the County of Santa Cruz are provided by these Guidelines.

Land Use Projects

A specific series of steps for SB 743 project evaluation have been developed to clarify requirements for land use projects and reduce potential confusion. Exhibit 1 provides a graphical representation of this process.

Exhibit 1 – Process for CEQA VMT Analysis for Land Use Projects



Step 1: Evaluate Land Use Type

During the initial step, the land use project will need to be classified into a type of land use:

- ***Land use type.*** For the purposes of analysis, the Institute of Transportation Engineers (ITE) land use codes serve as the basis of land use definitions. Although it is recognized that VMT evaluation tools and methodologies are typically not fully sensitive to some of the distinctions between some ITE categories, the use of ITE land use codes is useful for maintaining consistency across analyses, determining trip generation for other planning level tools, and maintaining a common understanding of trip making characteristics amongst transportation professionals. The ITE land use code is also used as an input into the sketch planning tool.
- ***Mixed Use.*** If there are multiple distinct land uses within the project (residential, office, retail, etc.), they will be required to be analyzed separately unless they are determined to be insignificant to the total VMT. Mixed-use projects are permitted to account for internal capture, which depending on the methodology, may require a distinct approach not covered in this documentation.
- ***Redevelopment projects.*** As described under Step 1b, redevelopment projects which have lower VMT than the existing on-site use can be determined to have a non-significant impact.

Step 2: Screen Projects

The purpose of this step is to determine if the facts of the project support a less-than-significant determination prior to conducting a VMT evaluation. The guidance in this section is primarily intended to avoid unnecessary analysis and findings that would be inconsistent with the intent of SB 743. A detailed CEQA transportation analysis will not be required for land use elements of a project that meet the screening criteria shown in Exhibit 2. If a project is mixed use in nature, only those elements of the project that do not comply with the elements in Exhibit 2 would require further evaluation to determine transportation significance for CEQA purposes.

Exhibit 2: Screening Criteria

Screening Criteria	OPR Guidance
SMALL PROJECTS [1]	Expected to cause a less-than-significant impact: ▪ Project trip generation is less than 110 net new trips per day. CEQA transportation analysis required if: ▪ Project is inconsistent with the Sustainable Communities Strategy as determined by the County of Santa Cruz.
PROJECTS NEAR HIGH QUALITY TRANSIT [2]	Expected to cause a less-than-significant impact: ▪ Project is located within a ½ mile of an existing major transit stop or high quality transit stop as defined in California Public Resources Code § 21064.3. Contact County staff or Santa Cruz

Exhibit 2: Screening Criteria

Screening Criteria	OPR Guidance
	METRO for a map of current major transit stops or high-quality transit corridors as bus service frequency can change as often as quarterly. CEQA transportation analysis required if: ▪ Project has a Floor Area Ratio (FAR) of less than 0.75. ▪ Project includes more parking for use by residents, customers, or employees of the project than required by the County of Santa Cruz Code. ▪ Project is inconsistent with the Sustainable Communities Strategy as determined by the County of Santa Cruz. ▪ Replaces affordable residential units with a smaller number of moderate- or high-income residential units.
LOCAL-SERVING RETAIL [3]	Expected to cause a less-than-significant impact: ▪ No single store on-site exceeds 50,000 square feet. ▪ Project is local serving as determined by the County of Santa Cruz. CEQA transportation analysis required if: ▪ If the nature of the service is regionally focused as determined by the County of Santa Cruz.
AFFORDABLE HOUSING [4]	Expected to cause a less-than-significant impact: ▪ The project provides a high percentage of affordable housing as determined by the County of Santa Cruz. (Contact County Planning Department for more information). CEQA transportation analysis required if: ▪ The percentage of affordable housing is determined by the County of Santa Cruz to be insufficient.
LOCAL ESSENTIAL SERVICE [5]	Expected to cause a less-than-significant impact: ▪ Day care center; ▪ Public K-12 school; ▪ Police or fire facility;

Exhibit 2: Screening Criteria

Screening Criteria	OPR Guidance
	▪ Local serving medical/dental office building; or ▪ Government service (in-person services such as post office, library, and utilities). CEQA transportation analysis required if: ▪ The nature of the service is regionally focused as determined by the County of Santa Cruz.
MAP-BASED SCREENING [6]	Expected to cause a less-than-significant impact: ▪ Area of development is under threshold as shown on screening maps. Use TREDLite Tool (described further below). CEQA transportation analysis required if: ▪ The project will result in significant population or employment growth that substantially changes regional travel patterns as determined by the County of Santa Cruz.
REDEVELOPMENT PROJECTS [7]	Expected to cause a less-than-significant impact: ▪ Project replaces an existing VMT-generating land use and does not result in a net overall increase in VMT. CEQA transportation analysis required if: ▪ Project replaces an existing VMT-generating land use and results in a net overall increase in VMT.

TABLE NOTES:

1. 2018 OPR Guidance, page 12. See Appendix C for more information.
2. 2018 OPR Guidance, page 13. As of 2025 the definition of major transit stop is any of the following: a) an existing rail or bus rapid transit station; b) a ferry terminal served by either a bus or rail transit service; or c) the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak periods.
3. 2018 OPR Guidance, page 16.
4. 2018 OPR Guidance, page 14. As described, "Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence."
5. Based on assumption that, like local-serving retail, the addition of necessary local in-person services will reduce VMT given that trips to these locations will be made irrespective of distance given their non-discretionary nature.
6. 2018 OPR Guidance, page 12.
7. 2018 OPR Guidance, page 18.

Screening Maps Using TREDLite

If a project is within an area where average VMT is below or at the County's threshold, as represented by the green areas in TREDLite, your project can be presumed to be less than significant. Areas in yellow are close to, but do not quite meet the threshold. If your project falls within a yellow area and cannot be screened out using other criteria as shown in **Exhibit 2**, implementing transportation demand management (TDM) mitigation measures may reduce the project's VMT to a level which results in a less than significant impact.

Steps 4 and 5 describe how to use the TREDLite tool to determine if the project's VMT can be mitigated on-site. If your project falls within a red area, start with the TREDLite tool to see how much VMT mitigation can be done on-site and then contact the County Planning Department to determine whether the remaining VMT can be mitigated in some other manner.

The layer on TREDLite showing residential VMT per capita may be used for residential land use projects and is also shown as **Figure 1** below. The layer on TREDLite showing work VMT per employee for office/service land use projects, also shown as **Figure 2** below, may be used for land use projects that are within the following sectors that fall under the office/service land use category: transportation and warehousing, information services, finance and insurance, real estate and leasing, professional and technical services, management, arts, entertainments and recreation, accommodation and food service or other similar services.

For projects that are related to agriculture, industrial, retail, education, health care, social assistance and public administration, please see **Exhibit 2** for other screening criteria. The maps do not apply to projects in those land use categories.

USING TREDLITE FOR MAP SCREENING

After opening the TREDLite tool and accepting the terms, navigate to the parcel(s) you wish to evaluate. You can type in the address in the left sidebar or use select from the map using the "single" pointer tool. (Make sure to select the button that reads "single" if you are selecting a parcel from the map.)

After the parcel(s) are selected, turn on theme layers by clicking on the button in the lower left of the map screen. You will have the option to view residential per capita VMT or work per employee VMT. Green areas can be presumed to be less-than-significant where as yellow parcels are likely to be able to mitigate using TDM - see Steps 4 and 5. If the parcel is in a red area, contact County staff as you are unlikely to be able to mitigate with on-site TDM measures.

Figure 1: Residential Screening Map

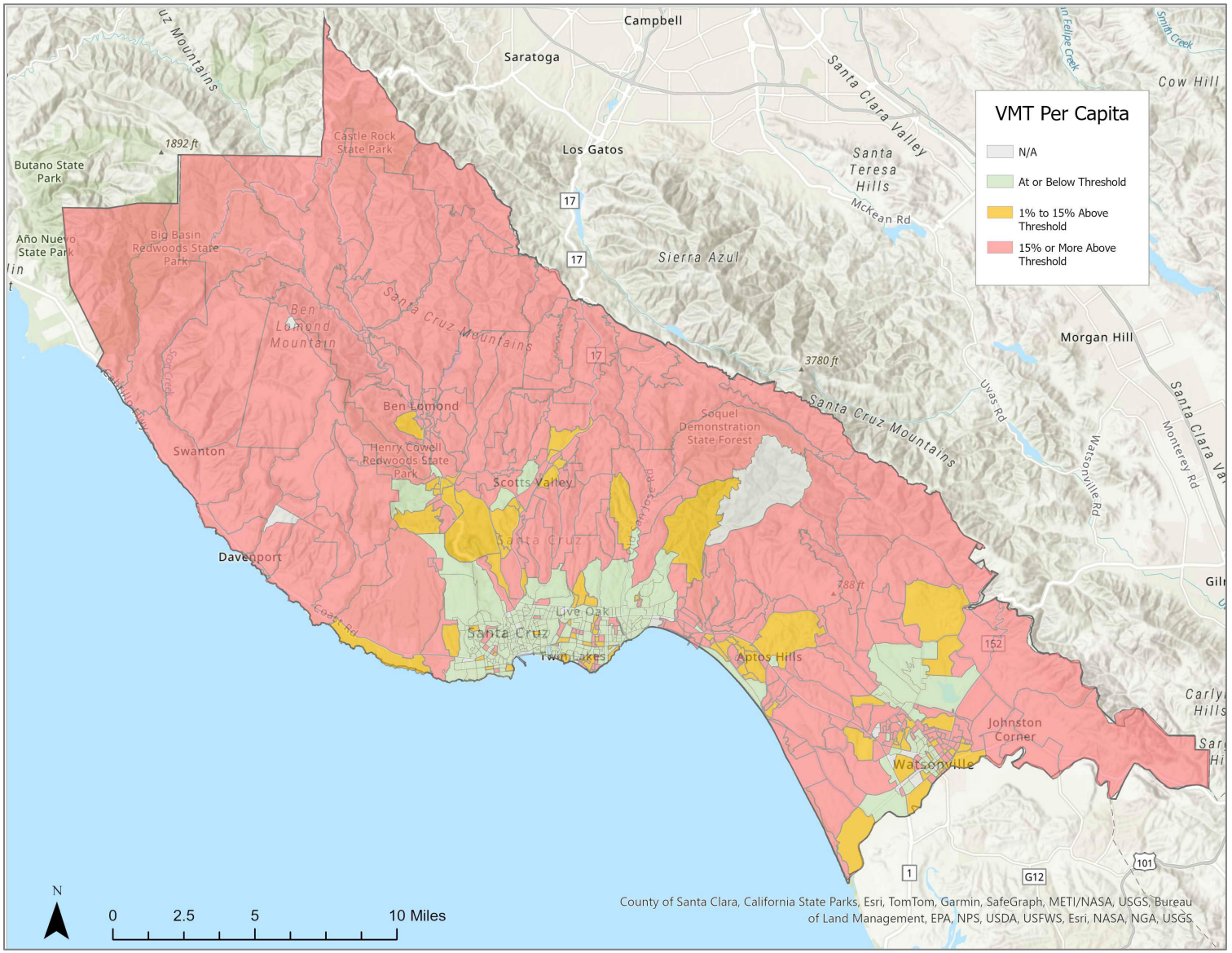
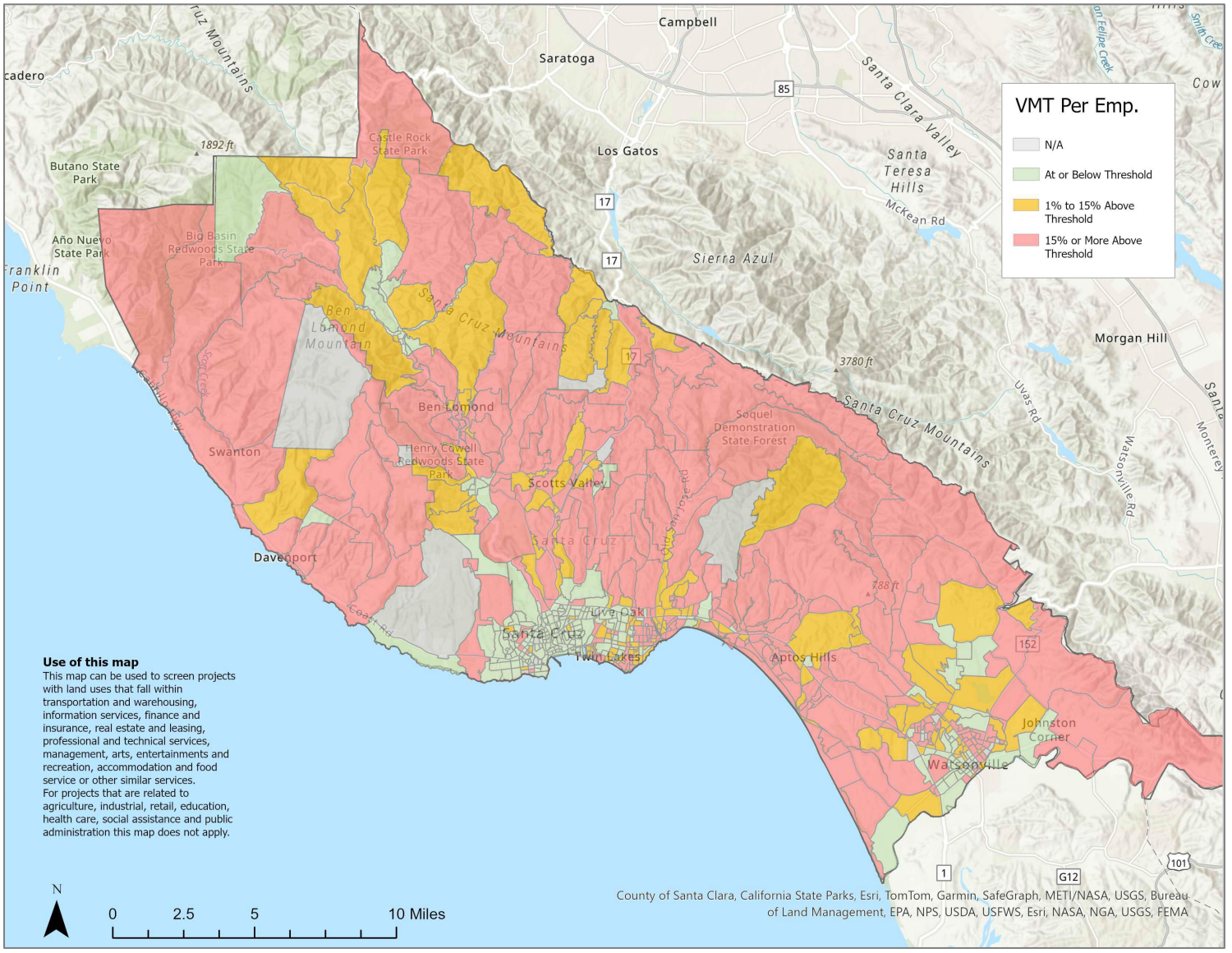


Figure 2: Service/Office Screening Map



Step 3: Identify Significance Threshold and Methodology

If the project can be screened out using any of the methods described in Step 2, the criteria used to screen it out should be documented and provided with the project application. If a project cannot be screened out and the project is a residential, office, service, or industrial land use, the applicant may use the TREDLite tool to determine the thresholds of significance. For all other land uses that cannot be screened out, the VMT analysis will require the use of the County of Santa Cruz travel demand model (SCC TDM). Significance thresholds are described in more detail below.

The TREDLite tool can be accessed here: TREDLite Tool and detailed instructions on how to use the TREDLite tool are included as **Appendix A** to these Guidelines.

In addition to project analysis, the TREDLite tool provides project applicants with TDM measures for on-site mitigation if determined to be necessary. Once the trip generation and TDM measures have been calculated, if there is still a VMT impact the applicant will need to coordinate with County staff to determine next steps. These next steps may include off-site mitigation and/or documentation through the CEQA process that all feasible mitigations have been evaluated and the project is unable to thoroughly mitigate its impacts. The resulting next steps are dependent on the nature of the project and current County policies and procedures in place.

Prior to undertaking any analysis, the applicant should consult with County staff to ensure they have identified the appropriate threshold and a scope of work that is compliant with County of Santa Cruz's requirements. Given the potential complexities of some land uses a consensus regarding the threshold and methodology is important to avoid analysis that is not compliant with the County of Santa Cruz's requirements.

Significance Thresholds

Significance thresholds are broadly categorized as efficiency and net change metrics. Efficiency metrics include VMT per capita and work VMT per employee[1], whereas "Net Change" refers to the net change in regional VMT. "Net Change" is used for elements that include a considerable customer base, such as commercial uses, although it can extend to a variety of land uses that have similar characteristics, as shown in **Exhibit 3**.

Exhibit 3 - Significance Threshold Methodology

Type of Metric	Land Use	VMT Threshold	Customer Component	Analysis Methods
Efficiency	Residential, Professional Office, Industrial	Per capita or per employee	No	Screening Criteria, TREDLite Tool, Travel Demand Model
Net Change	Retail, Medical Office, Hospital, Sports Venue	Regional change in VMT	Yes	Screening Criteria, Travel Demand Model

[1] Work VMT specifically applies to commute trips as represented by the attractions in the Travel Demand Model. Refer to Appendix B for additional information

For projects with a significant customer base, it is typically appropriate to separate employee trip characteristics from the customer base unless the customer base is minimal in nature. Under these circumstances, it is most appropriate to evaluate the total of the delta in regional VMT resulting from the customer base plus the delta of VMT resulting from employees based on the following formula:

(number of employees) x (estimated VMT/employee – threshold VMT/employee) +

(number of customers) x (estimated VMT/customer – threshold VMT/customer)

The threshold of significance will accordingly correspond to the "Net Change" threshold as described in **Exhibit 3**. Under these circumstances, it is most appropriate to evaluate this total Net Change as the basis for evaluating the outcome of mitigations in terms of determining transportation significance, although each element of the project should be tallied separately for the purposes of clarity.

OPR suggests a 15% VMT reduction relative to existing local or regional average VMT levels. The thresholds of significance recommended by OPR, as they relate to the County of Santa Cruz, are summarized in **Exhibit 4**.

Exhibit 4 - OPR-Suggested VMT Thresholds of Significance

Land Use	OPR Guidance[2]
Residential	15% below existing county-wide average VMT per capita
Office	15% below existing county-wide average VMT per employee
Retail	Net increase in total VMT

Based on these criteria, the VMT thresholds of significance shown in **Exhibit 5** have been adopted by the County of Santa Cruz.[3]

Exhibit 5 - VMT Thresholds of Significance

Land Use	VMT Threshold	Basis
Residential	13.6 VMT/capita[4]	15% below existing county-wide average VMT per capita.
Professional Office or Service	9.9 Work VMT/Employee[5]	15% below existing county-wide average Work VMT per employee

[2] *2018 OPR Guidance*, Pages 15-16

[3] Adopted June 16, 2020, resolution number 146-2020.

[4] Residential VMT specifically applies to all Home-Based trips residential trips as represented in the Travel Demand Model. Refer to Appendix B for additional information.

[5] Work VMT specifically applies to commute trips as represented in the Travel Demand Model. Refer to Appendix B for additional information

Retail	Net regional change	Using the County of Santa Cruz as the basis (instead of the tri-county region)
Other Employment	Work VMT/Employee[6]	15% below existing countywide average Work VMT per employee for similar land uses
Other Customer	Net regional change	Using the County of Santa Cruz as the basis

Note that the inclusion of "Other Employment" and "Other Customer" refers to all other employment and customer service categories that are not included in the basic office/service or retail categories. As shown, these other land use categories follow a similar approach to the office/service and retail categories with the principal difference being that the basis for the threshold would be the aggregation of the specific "Other" land use across the county (i.e., an industrial project would use industrial uses, etc.).

Based on improvements to methods, data, or the travel demand model, there may be periodic updates to the numerical threshold values shown above. However, the overall approach for calculating the thresholds and the project's impact should remain the same. Note that the values used in the TREDLite tool are current and will supersede the information provided in the table above if they do not match. Additional thresholds for various employment types not contained in the table above are also provided in the TREDLite tool. The County has the authority to review and supersede thresholds provided in TREDLite as there are situations in which the thresholds in the tool do not account for unique land use contexts. Documentation of the Travel Demand Model update completed to arrive at thresholds for the County of Santa Cruz is provided in Appendix B.

Step 4: Analysis and Mitigation

If a potentially significant transportation impact is identified, feasible mitigation measures to avoid or reduce the impact must be identified. CEQA requires that the mitigation measures are included in the project's environmental assessment. OPR provides a list of measures to reduce VMT but gives the lead agency full discretion in the selection of mitigation measures.

The type and size of the project will determine the most appropriate mitigation strategies for VMT impacts. For large projects such as general plans or specific plans, VMT mitigations should concentrate on the project's density and land use mix, site design, regional policies, and availability of transit, bicycle, and pedestrian facilities. For smaller projects such as an individual development project, VMT mitigations will typically require the preparation of a transportation demand management (TDM) program. A TDM program is a combination of strategies to reduce VMT. The program is created by an applicant for their land use project based on a list of strategies agreed to with the County of Santa Cruz.

If a project cannot be screened out in Step 2, the TREDLite tool may be used to identify TDM measures to mitigate residential, office, service and industrial land uses on-site. Note that at this time, retail land uses and other efficiency-based land uses cannot use TREDLite to identify TDM

[6] Work VMT specifically applies to commute trips as represented in the Travel Demand Model. Refer to Appendix B for additional information

measures. If mitigation measures identified in the TREDLite tool do not result in full mitigation of the project, then additional analysis may be required. The County has the authority to approve or deny TDM measures for appropriateness and may allow for TDM measures that are not currently included in the TREDLite tool, but that reduce VMT. Please contact County staff to determine next steps.

Documentation providing detailed assumptions that are clearly understandable and methods that can be replicated should be provided, along with the results of the VMT analysis for the proposed project.

TREDLite Background

In 2020, the County of Santa Cruz developed a list of potential TDM strategies appropriate for the County, as well as the magnitude of VMT reduction that can be achieved. The selection process was guided by the California Air Pollution Control Officers Association (CAPCOA) recommendations found in the 2010 publication *Quantifying Greenhouse Gas Mitigation Measures*. These measures of effectiveness have been updated to follow the recommendations in the 2021 publication *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* which was the CAPCOA update to the 2010 handbook.

CAPCOA has found that strategies with the largest VMT reduction in rural areas include vanpools, telecommute programs or alternative work schedules, and master planned communities with design and land-use diversity to encourage intra-community travel. Based on empirical evidence, the 2010 CAPCOA handbook found the cross-category maximum for all transportation-related mitigation measures is 20% for urban settings. Therefore, the maximum allowable reduction for a project in the County of Santa Cruz was established as 20%. The recent update to the CAPCOA handbook includes subsector maximums and a combined maximum of 70%. However, given the land use context of the County, the cap for TDM reductions has been retained. The 20% reduction maximum does not allow for the same magnitude of impact that TDM measures have in highly urban areas with expansive transit systems and dense urban infill. While all TDM measures are shown in TREDLite for the convenience and education of the user, any TDM measures selected for a project must be approved by the County Planning Department to ensure consistency with current county regulations and viability for the project site.

The purpose of TREDLite is to calculate VMT for a land use project. As with any planning tool, there are distinct limitations in its application, including limits on the type and size of development that can be applied to. Note that it is anticipated that the tool will continue to evolve in response to data or methodological changes, and as such it is important that the most current version of the tool be utilized. Broadly, the sketch planning tool provides the following information:

- ITE Trip Generation
- VMT Threshold Analysis
- GHG Estimation
- TDM Evaluation

Instructions on how to use the TREDLite tool are provided in **Appendix A.**

Travel Demand Model

Under some circumstances the TREDLite tool may not be sufficient to analyze a project's VMT impact. Land uses that require the use of a net change metric will need to be analyzed independently. Additionally, unique or large land uses such as schools, visitor accommodations, assisted living, or large master planned communities or campuses will not be adequately captured by the TREDLite tool. In these circumstances County staff may require the applicant to hire a qualified transportation professional to use the County of Santa Cruz travel demand model (SCC TDM) to appropriately reflect the land use and calculate VMT.

Step 5: Mitigation Monitoring

As required by CEQA, the County of Santa Cruz will require ongoing mitigation monitoring and reporting. The specifics of this will be developed on a project-by-project basis.

Transportation Projects

Depending on the specific nature of a transportation project; it can alter trip patterns, trip lengths, and even trip generation. Research has determined that capacity-enhancing projects can and often do increase VMT. This phenomenon is commonly referred to as "induced demand". While methods are generally less developed for the analysis of induced demand compared to other areas of transportation analysis, there is still the need to quantify and understand its impact to the transportation system considering the requirements of SB 743.

Similar to the analysis of land use projects, the approach to transportation project analysis closely aligns with the 2018 OPR Guidance. The analyst should first determine whether the transportation project has been prescreened and determined to have a non-significant impact as described in the following section.

Screen for Non-Significant Transportation Impact

The following non-significant impact examples are provided directly from the 2018 OPR Guidance[7]:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways, roadways, bridges, culverts)
- Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities and do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails

[7] *2018 OPR Guidance*, Page 20

- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general-purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., high occupancy vehicle (HOV) lanes, high occupancy toll (HOT) lanes, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage

- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve nonmotorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Significance Threshold and Methodology

For projects that increase roadway capacity and are not identified under the Non-Significant Screening Criteria in the prior section, the significance criterion should be net change in regional VMT. A finding of a significant impact would be determined if a transportation project results in a net increase in regional VMT.

Appendix A: Using TREDLite

»TREDLiteVMT

QUICK START GUIDE

TREDLite VMT *for Santa Cruz County*

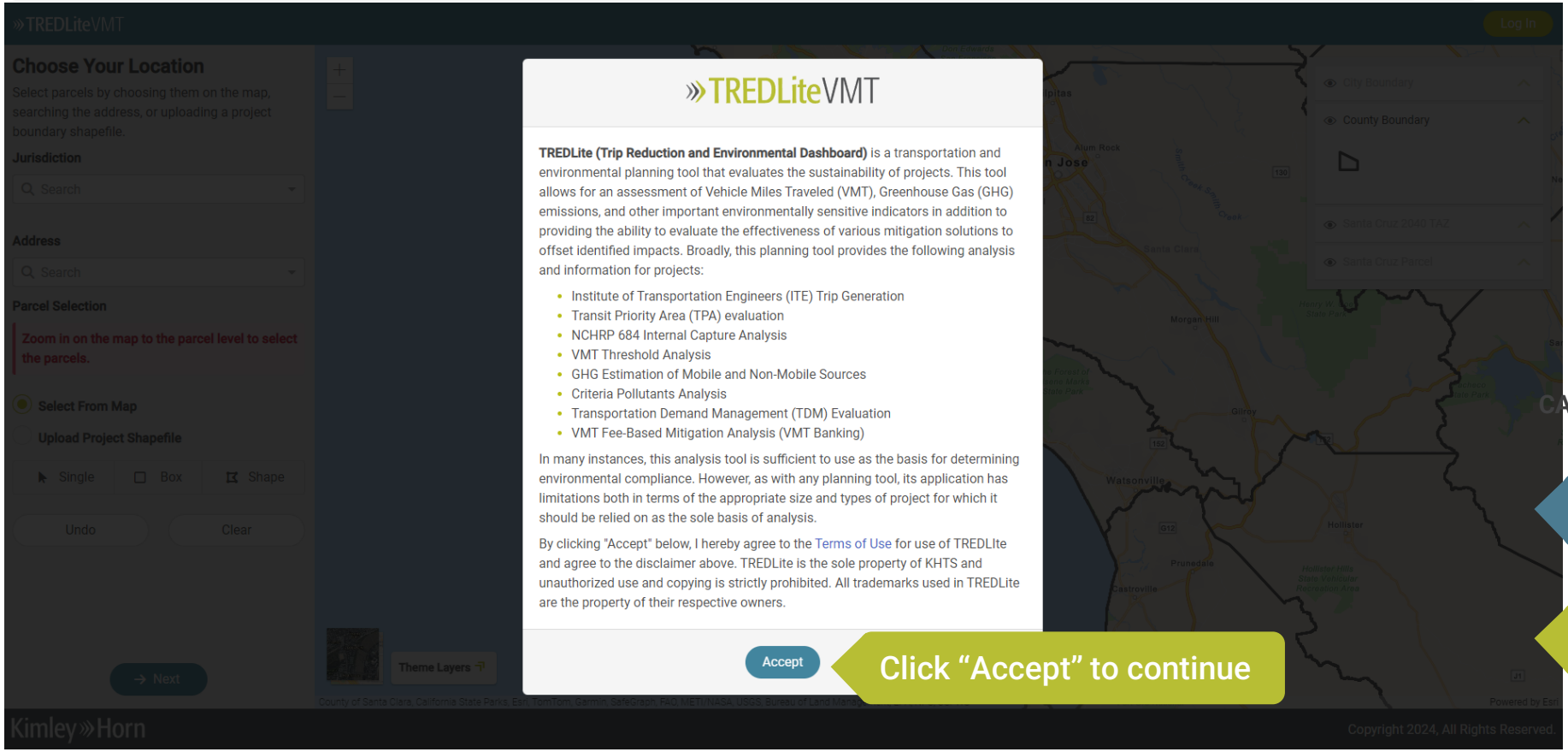
A Kimley-Horn Sustainable Transportation Solution

This help file describes the main concepts, vocabulary, and application functionality.

Getting Started

https://tredlite.kimley-horn.com/sites/santacruz

Use this website to launch the site from your browser



CALLOUT KEY

Callouts in **blue** highlight key instructions or considerations

Callouts in **green** provide general guidance or instructions

Few things to note:

- TREDLite relies on big data, and travel demand model data that has been processed by Kimley-Horn
- Thresholds are based on OPR guidance and are established for Santa Cruz County
- Sometimes there are “blanks” in the data given that there is no existing data for a land use

Choose Your Location

Select parcels by choosing them on the map, searching the address, or uploading a project boundary shapefile.

Jurisdiction

City of Santa Cruz

Address

Search

Parcel Selection

Zoom in on the map to the parcel level to select the parcels.

- Select From Map
- Upload Project Shapefile

Single | Box | Shape

Undo | Clear

Select Jurisdiction and map will zoom to that area

Option to either enter project address or select parcel using the toggle below

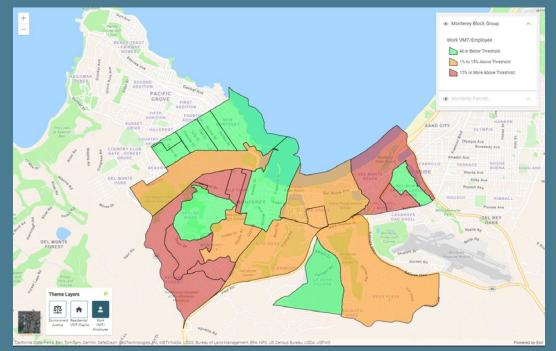
Note: you must zoom in *(use mouse scroll wheel)* to display the parcel layer to see and select an individual parcel

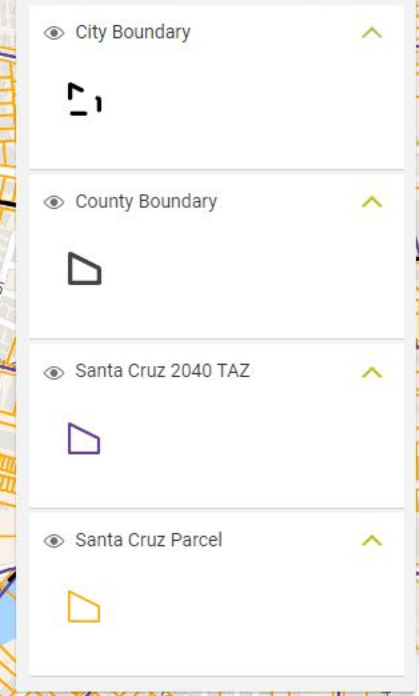
Click "Single" to pick a specific parcel

Click "Next" to proceed.

→ Next

Activate colored/hatched theme maps, showing VMT/Capita or VMT/Employee based on thresholds established for the jurisdiction and/or the location of disadvantaged communities.





Project Information

Project Name

Mixed-Use Project A

Enter a project name to proceed.
Note: that this is a required input

Analysis Year

2019

Project Context/Setting

Low Density Suburb

Select analysis year

ITE Trip Gen Land Use

210 - Single-Family Detached Housing

Select project land uses
(up to 10 land uses can be added)

Land Use Quantity

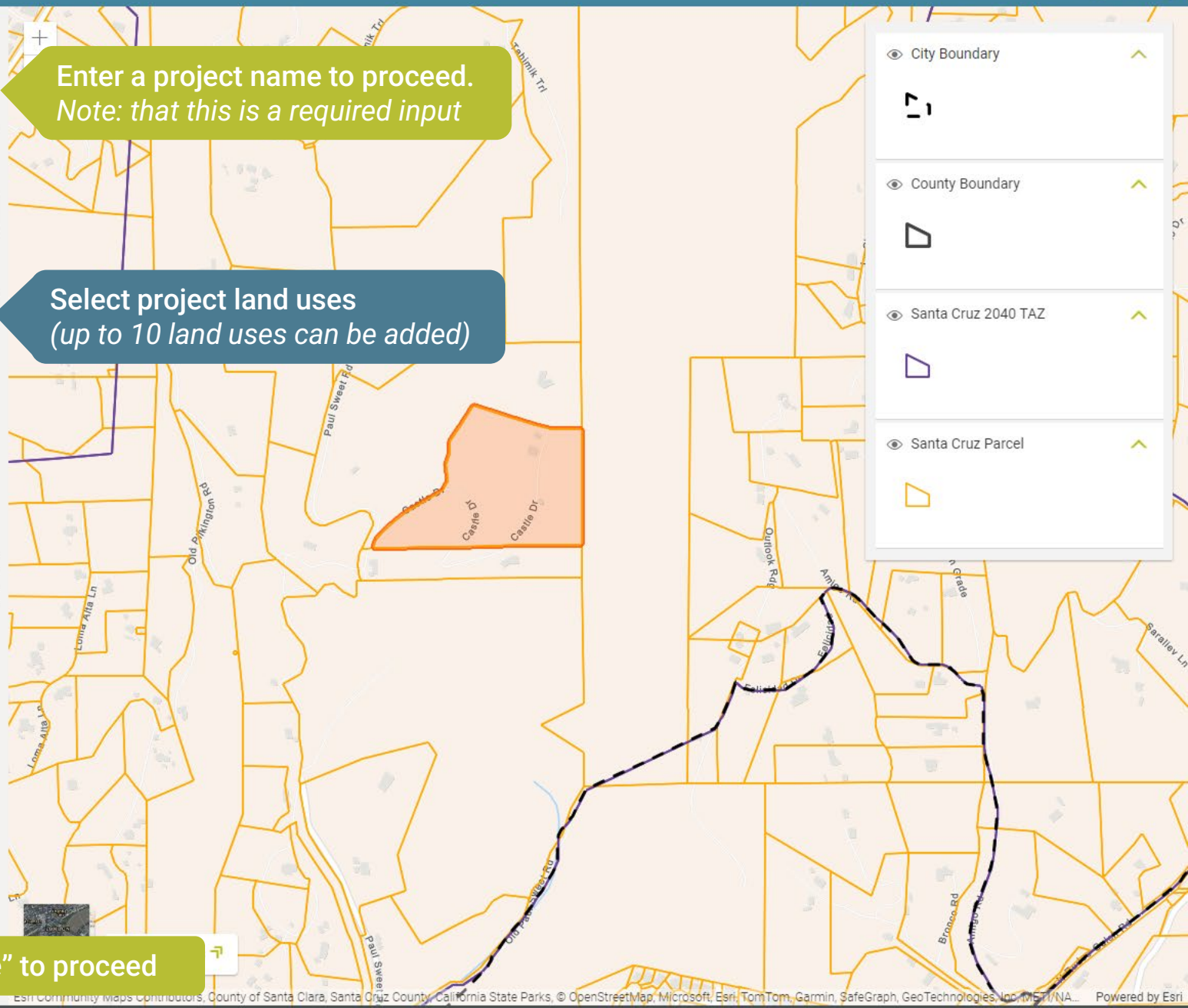
100

Enter land use quantity
(In thousands for nonresidential, dwelling units for residential.)

Add Land Use

Click to add project land uses

ITE Trip Gen Land Use	Quantity	Units	
710 - General Office Building	50	1,000 Sq Ft	



← Back

→ Calculate

Click “Calculate” to proceed

Internal Capture

Note: that if only a single land use is entered this screen will not appear. This module allows for analysis of internal capture as documented by NCHRP 684.

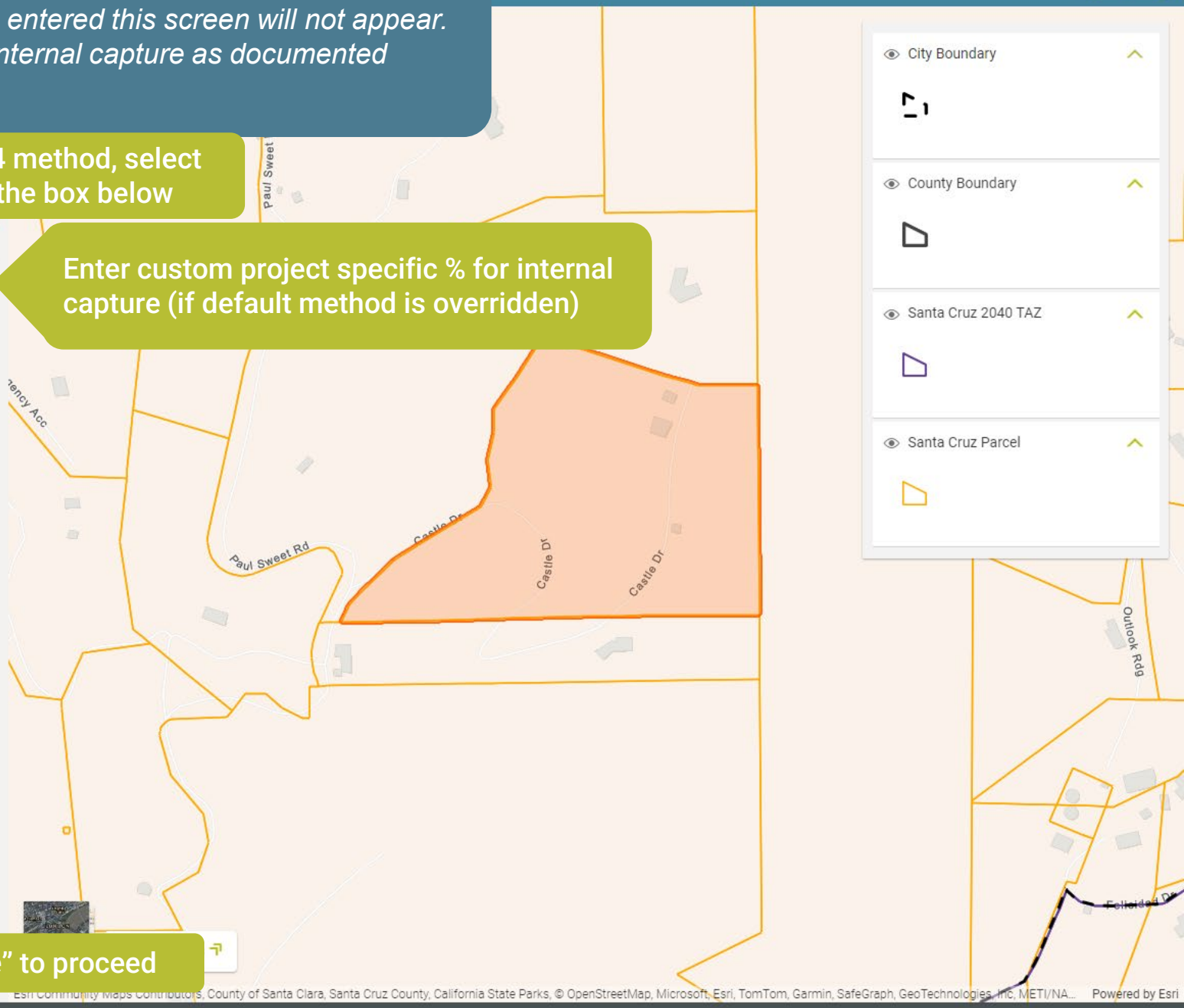
NCHRP 684

Custom

If desired to override the default NCHRP 684 method, select "Custom" to enter Internal Capture Rates in the box below

710 - General Office Building	487	19	3.90
210 - Single-Family Detached Housing	944	19	2.01

Enter custom project specific % for internal capture (if default method is overridden)



← Back

→ Calculate

Click "Calculate" to proceed

Analysis

Project Name: Mixed-Use Project A

Location: City of Santa Cruz

Analysis Year: 2019

Project Land Use & Intensities:

Land Use	Quantity	Units	Per Capita/Employee VMT	Mitigation			
710	50	1,000 Sq Ft	13.0	13.0	1,934.7	9.9	Yes
210	100	Dwelling Unit(s)	19.4	19.4	4,659.0	13.6	Yes
				Totals	6,593.7		

Total Emission Estimates:

Pollutant	Mobile	Mitigation	With Mitigation	Non Mobile	Total
CO (lb/day)	71.72	0.00	71.72	134.79	206.51
ROG (lb/day)		0.00	7.40	99.61	107.01
NOX (lb/					
SOX (lb/					
PM2.5 (l					
PM10 (lb/day)	8.40	0.00	8.40	18.07	26.47
CO_2 (mt/year)	1,442.96	0.00	1,442.96	623.13	2,066.09

Project Presumptions of Less than Significant Impact

- [ ] Within a 1/2 mile of Major Transit Stop
- [ ] Less than 110 Trips per Day

If your project result is higher than the threshold, we recommend clicking the **Mitigate VMT** button to learn and decide on ways to mitigate your transportation impact. Otherwise, click Print Results.

← Back | Print Results | → Mitigate VMT

Graph shows VMT result & threshold for each *individual* land use

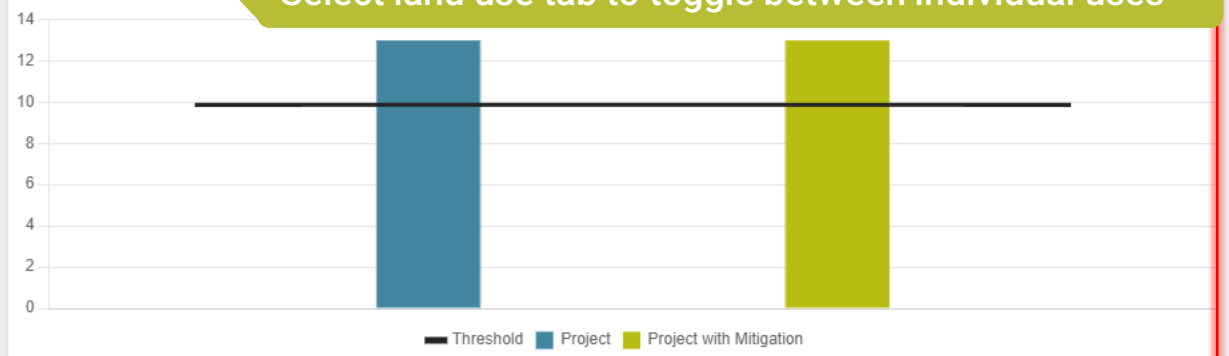
Note: Air quality is shown both in the aggregate and for individual uses and includes both mobile and non mobile sources

This is being implemented in *a separate GIS module*

Click "Mitigate VMT" if it is over the threshold

ITE 710 | ITE 210

Select land use tab to toggle between individual uses



Regional Average (HBW VMT/Emp): 11.6 Threshold (15% below Average): 9.9

Metric	Project	Mitigation	With Mitigation
HBW VMT/Emp	13.0	0.0	13.0
Daily Trips	468	0	0

Pollutant	Mobile	Mitigation	With Mitigation	Non Mobile	Total
CO (lb/day)	21.85	0.00	21.85	0.23	22.08
ROG (lb/day)	2.36	0.00	2.36	1.31	3.67
NOX (lb/day)	3.38	0.00	3.38	0.26	3.64
SOX (lb/day)	0.03	0.00	0.03	0.00	0.03
PM2.5 (lb/day)	0.70	0.00	0.70	0.02	0.72
PM10 (lb/day)	2.50	0.00	2.50	0.02	2.52
CO_2 (mt/year)	357.78	0.00	357.78	151.04	508.82

Land Use Presumptions of Less than Significant Impact

- [ ] Affordable Housing
- [ ] Local Serving Land Use

Transportation Demand Management (TDM)

VMT can only be mitigated in each group by up to the stated Group Max Reduction. The current reduction listed for each group must not exceed the max reduction for its respective group.

CAPCOA Handbook

Selected Land Use: 710 - General Office Building

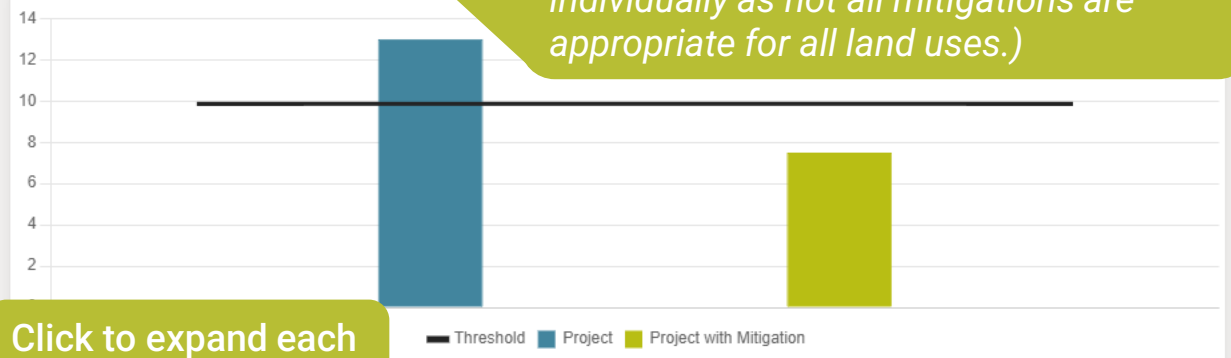
Total Maximum Reduction: 20%

Current Reduction: 42.17%

TDM Measure	Description	Max VMT Reduction	Input	Input Definition	Reduction
Land Use Strategies - Group Max Reduction: 20%, Current Reduction: 0.00%					
Trip Reduction Programs - Group Max Reduction: 20%, Current Reduction: 0.00%					
Parking or Road Pricing / Management - Group Max Reduction: 20%, Current Reduction: 3.92%					
Provide Electric Vehicle Charging Infrastructure (T-14) Reminder: Does not reduce VMT	Install onsite electric vehicle chargers in an amount beyond what is required by the 2019 California Green Building Standards (CALGreen) at buildings with designated parking areas (e.g., commercial, educational, retail, multi-family).	11.90%	20 200 2022	number of chargers installed (e.g. 20) daily vehicles accessing the site (e.g. 200) project opening year	0.80%
Limit Residential Parking Supply (T-15)	This measure will reduce the total parking supply available at a residential project or site. Limiting the amount of parking available creates scarcity and adds additional time and	13.70%	100 80 50 %	required parking (e.g. 100) provided parking (e.g. 80) percentage of VMT generated by residents	0.65%
Parking Costs (T-16)	costs, requiring those who wish to purchase parking spaces to do	15.70%			2.48%

← Back | Print Results

ITE 710 | ITE 210



Threshold (15% below Average): 9.9

Metric	Project	Mitigation	With Mitigation
HBW VMT/Emp	13.0	5.5	7.5
Daily Trips	468	0	0

Pollutant	Mobile	Mitigation	With Mitigation	Non Mobile	Total
	21.85	9.22	12.64	0.23	12.86
	2.36	0.99	1.36	1.31	2.68
	3.38	1.42	1.95	0.26	2.21
	0.03	0.01	0.02	0.00	0.02
	0.70	0.29	0.40	0.02	0.42
	2.50	1.05	1.45	0.02	1.46
CO_2 (mt/year)	357.78	150.89	206.89	151.04	357.93

Land Use Presumptions of Less than Significant Impact

- ☐ Affordable Housing
- ☐ Local Serving Land Use

Select land use tab to toggle between Individual uses *(land uses are mitigated individually as not all mitigations are appropriate for all land uses.)*

Click to expand each TDM category

Enter project specific inputs for applicable TDM

Results of each TDM based on data entered

Although the 2021 CAPCOA guide does not include a maximum percent, we still recommend using maximums.

Click “Print Results” to capture a PDF of inputs and outputs

TREDLite VMT

web https://tredlite.kimley-horn.com/sites/santacruz

email michael.schmitt@kimley-horn.com

Appendix B: Travel Demand Model Update

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Memorandum

To: Anais Schenk
County of Santa Cruz, Community Development & Infrastructure

From: Ayberk Kocatepe, Ph.D
Chris Gregerson, P.E., T.E., PTOE, PTP
Michael Schmitt, P.E., AICP CTP, PTP, RSP1

Re: Santa Cruz County Travel Demand Model (SCC TDM) Update
Santa Cruz County Regional VMT Mitigation Program, Santa Cruz County

Date: August 8, 2023

This memorandum documents the process undertaken to update the Santa Cruz County Travel Demand Model (SCC TDM) for the purposes of performing VMT Mitigation analysis for projects selected as part of the Santa Cruz County Regional VMT Mitigation Program.

Model Overview

The Santa Cruz County Travel Demand Model is designed to forecast future travel patterns on both roadway and transit routes throughout Santa Cruz County (SCC). The model can be used to assess how changes in population, employment, demographics, and transportation infrastructure affect travel patterns within the county. The SCC Model is a four-step travel demand model based on the TransCAD platform. The SCC Model was developed to provide more detailed information on travel patterns within Santa Cruz County than could be accomplished by the tri-county regional travel demand model provided by the Association of Monterey Bay Area Governments (AMBAG).

The California Transportation Commission publishes and periodically updates guidelines for the development of long-range transportation plans that includes guidelines for regional travel demand modeling. The SCC Model follows these guidelines. These guidelines include sensitivity to the following policies/programs including:

- Land Use
- Geographic scale
- Sensitivity to mode
- Pricing
- Sensitivity to congestion
- Validation
- Documentation

The SCC Model is an enhanced four-step model. The four primary sub-models making up the four-step model process are:

1. Trip Generation. This initial step calculates person ends using trip generation rates established during model estimation and refined to Santa Cruz County. Truck trips are currently included in non-home based and are not estimated separately. The SCC TDM runs a series of complex steps to estimate daily trip productions and attractions by various trip purposes for each TAZ. The trip purposes are listed below:
    a. Home-Based Work (HW)

b. Home-Based Other (HO)
c. Home-Based School, K-12 (HK)
d. Home-Based College (HC)
e. Home-Based Shopping (HS)
f. Work-Based Other (WO)
g. Other-Based Other (OO)

The production model uses several variables to generate trips such as the number of workers, household income, age, household size, and car availability. Trip productions for every TAZ in the model are compiled separately by each trip purpose. The attraction model uses employment categories for the HW trip purpose and employment categories and the number of students (K-12 and University) for all other trip purposes. The attraction model estimates trip attractions to each TAZ by regression coefficients that vary by employment type. Trip attractions for every TAZ are compiled by each purpose and by each employment type based on these regression coefficients.

2. Trip Distribution. The second general step estimates how many trips travel from one zone to any other zone. The distribution is based on the number of trip ends generated in each of the two zones, and on factors that relate the likelihood of travel between any two zones to the travel time between the two zones such as distance, cost, and time, and varies by accessibility to passenger vehicles, transit, and walking or biking. This step also determines how many trips enter or leave the model area.
3. Mode Choice. This step uses demographics and the comparison of distance, time, cost, and access between modes to estimate the proportions of the total person trips using drive-alone or shared-ride passenger auto, transit, walk, or bike modes for travel between each pair of zones.
4. Trip Assignment. In this final step, vehicle trips and transit trips from one zone to another are assigned to specific travel routes between the zones. Congested travel information is used to influence each of the steps described above starting with vehicle availability for all models and starting with land use location for integrated land-use transportation models.

Methodology

The SCC TDM was most recently updated to contain the base year of 2019 and a future year of 2045. The land use updates were incorporated into the model by updating the information at the Traffic Analysis Zone (TAZ) level. There are 696 TAZs within the County, including 364 TAZs within the unincorporated parts of the County. In consultation with the SCCRTC and Santa Cruz County, the transportation analysis zone (TAZ) geography for the SCC Model is based on the AMBAG TAZ geography with revisions for Santa Cruz County. The land use updates included updating the households and population information in each TAZ, as well as the employment by category.

Socioeconomic and Employment Data

In order to ensure that SCC travel demand model accurately reflects the current conditions of Santa Cruz County, we gathered the latest information on various key factors. We obtained this data from the AMBAG travel demand model that was updated in 2022. By leveraging the insights provided by AMBAG, we were able to incorporate the most up-to-date details on population growth, land use patterns, and socio-economic factors into the Santa Cruz County travel demand model.

When updating the residential data within the model (households and population), socioeconomic data (SED) associated with each TAZ must also be updated. The SED in the SCC TDM provides information about the makeup of the households in each TAZ. There are several different variables in the model SED,

including the age of the residents, household size, household income, number of vehicles per household, number of workers per household, and the number of vehicles per worker. It should be noted that while the SCC TDM uses dwelling units as its input, there is no differentiation between single-family and multi-family residential in terms of trip generation and distribution.

To update the employment variables, we made modifications to reflect the accurate number of workers based on specific employment categories. These categories were established by AMBAG and were inherited in the 2022 model update. They were defined using the North American Industry Classification System (NAICS) codes, as outlined in Exhibit 1. During the migration process of incorporating these employment categories into the SCC model, we regrouped them into six overarching categories.

1. Agriculture
2. Construction
3. Industrial and Manufacturing
4. Retail
5. Service (White Collar, Food Services, and jobs not included in other categories)
6. Public Administration (Government, Health Care, and Educational jobs)

Exhibit 1 – Land Use Categories in the AMBAG TDM

Category	Description and NAICS codes
Agriculture	Agriculture, Forestry, Fishing, and Hunting (11)*
Construction	Construction (23), Utilities (22), Transportation and Warehousing (48-49), Administrative and Support and Waste Management and Remediation Services (56), Public Administration (92)*
Manufacturing and Mining	Mining (21), Manufacturing (22, 31-33),
Wholesale	Wholesale Trave (42), Agriculture, Forestry, Fishing, and Hunting (11)*
Retail	Retail Trade (44-45), Agriculture, Forestry, Fishing, and Hunting (11)*
Finance and Real Estate	Information (51), Finance and Insurance (52), Real Estate Rental and Leasing (53), Professional, Scientific, and Technical Services (54), Management of Companies and Enterprises (55)
Education	Educational Services (61), Public Administration (92)*
Healthcare	Health Care and Social Assistance (62)
Service	Art, Entertainment, and Recreation (71), Accommodation and Food Service (72), and Other Services (81)
Public	Public Administration (92)*
*Note: Some NAICS industry sectors have been divided up, based on business operations and transportation demand, across AMBAG sectors.	

Calibration and Validation

Once the travel demand model was updated with the latest information, we proceeded with the validation process to ensure its accuracy and reliability. A crucial aspect of this validation process was the utilization of traffic counts to validate the model at the link level. By comparing the model's predicted traffic volumes with the actual observed counts, we could assess the model's performance and identify any discrepancies. Furthermore, the validation of the model encompassed the evaluation of traffic flows across screenlines, which consist of multiple roadways. This comprehensive approach aimed to capture the overall traffic patterns effectively. Our objective was to meet or surpass the validation guidelines set by Caltrans and the Federal Highway Administration. As part of the validation process, adjustments were

made to elements within the trip generation, trip distribution, and traffic assignment modules whenever necessary to ensure the model's accuracy and reliability.

Traffic counts (50 locations) used for the travel demand model update were gathered during late October and November 2022 (Appendix A). All 7-day-hour ADT counts (21 locations) were specifically collected as part of this project. Other 3-day-hour ADT counts (29 locations) were part of the 'Countywide Traffic Data Collection Program' efforts currently ongoing in the county. To enhance the accuracy of the model, the project team also used big data sources by accessing their AADT data for 44 locations (Appendix A). These counts were used for link-level calibration. Where applicable, these counts were also used in the cutline/screenline calibration.

The results of the model validation and comparison to best practice standards are shown in Exhibit 2 and Exhibit 3. The calibration results were within industry-accepted ranges for all measures for the daily validation exercise. This certifies that the model meets standard validation criteria.

To facilitate this validation, we performed other tests that provide valuable insights into the model's accuracy at different levels. These included the percentage of Root Mean Square Error (%RMSE) by facility type or volume groups and the Model/Count comparison by facility type or volume groups. We observed that the margin of error was slightly higher for the small-volume links (Appendix B-C). The limitations of travel demand models cause small-volume links to have a higher margin of error. These limitations include focusing on overall trends, variability in traffic patterns compared to high-volume links, sensitivity to model assumptions, and spatial resolution.

Travel demand models strive to represent overall travel patterns as accurately as possible. As long as the model behaves consistently and aligns with the larger travel patterns, the acceptable margin of error for small-volume links is deemed reasonable for practical purposes in transportation planning and analysis. Based on Caltrans and Federal Highway Administration (FHWA) requirements, and tests we performed, the Santa Cruz County Travel Demand Model (TDM) has been determined to be statistically valid.

Exhibit 2 – Static Model Validation for 2019 Base Year Model

Static Model Validation		
Criteria	***Target***	**Daily**
Model/Count Ratio	*0.90-1.10*	1.09
Percent Within Caltrans Maximum Deviation	*> 75%*	75.2%
Percent Root Mean Square Error	*< 40%*	37%
Correlation Coefficient	*> 0.88*	0.97

Exhibit 3 – Static Model Validation for 2019 Base Year Model (Screenline)

Static Model Validation (Screenline)		
Criteria		**Daily**
Model/Count Ratio	*0.90-1.10*	1.08
Percent Within Caltrans Maximum Deviation	*> 75%*	75.2%
Percent Root Mean Square Error	*< 40%*	44%
Correlation Coefficient	*> 0.88*	0.96

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Appendix A

Traffic Count Locations

No	Location	Description	No	Location	Description
1	Freedom Blvd	S of Alta Vista Ave,N of Crestview Dr	27	Graham Hill Rd	W of Mt. Hermon Rd
2	7th ave	South of Tanner Tt, North of Harbor Oaks Ct	28	Freedom Blvd	N of Buena Vista Dr
3	Main St	NW of Riverside Dr, SE of Beach St	29	Riverside Dr	E of Coward Rd
4	7th Ave	South of Soqeul Ave, North of Bostwick Ln	30	San Andreas Rd	S of Bonita Dr
5	E Cliff Dr	E of 9th Ave Sw of Prospect St	31	17th Ave	S of Brommer St
6	Brommer St	W of 30th Ave, E of Darlene Dr	32	Brommer St	W of 17th Ave
7	Soqeul Wharf Road	S of Cabrillo Hwy, N of Clares St	33	Soquel Dr	W of Rodeo Gulch Rd
8	Bay Dr	S of Meder St, N of Nobel Dr	34	Portola Dr	E of 24th Ave
9	Empire Grade	W of Western Dr, E of Highview Dr	35	Portola Dr	W of 41st Ave
10	Park Ave	W of Wesley St, E of Washburn Ave	36	Park Ave	N of Hwy 1
11	Rodriquez St	W of Koopmans Ave, E of Jose Ave	37	Porter St	S of Main St
12	Seabright Ave	North of Windsor St, S of Broadway	38	Soquel Dr	W of 41st Ave
13	Murray St	W of Brook Ave, E of Pilkington Ave	39	Soquel Dr	W of Porter St
14	Blackburn St	NW od Riverside Dr, SE of Wildcatz Way	40	Hwy 9	N of Redwood Dr
15	S Green Valley Rd	N of Kralj Dr, S of Oakridge St	41	Hwy 9	West of Main St
16	Cabrillo Hwy	E of Park Avenue interchange after ramps	42	Hwy 9	S of Clear Creek Rd
17	E Cliff Dr	W of 24th Ave, E of Coastview Dr	43	Hwy 9	S of Pool Dr
18	Airport Boulevard	W of Hangar Way, N/E of Nielson St	44	Hwy 9	N of Lakeview Dr
19	W Beach St	W of Rodriguez, E Walker St	45	Hwy 9	N of Graham Hill Rd
20	Graham Hill Rd	W of Lockewood Ln, E of E Zayante Road	46	Hwy 9	S of Glen Arbor Rd SOUTH
21	Front St	N of Laurel St, S of Cathcart St	47	Central Ave/SR 9	S of Big Basin Way/SR 236
22	Freedom Blvd	E of Soquel Dr	48	Hwy 9	S of Bear Creek Rd
23	Sea Ridge Rd	W of State Park Dr	49	Hwy 9	S of Graham Hill Rd
24	Soquel Dr	W of State Park Dr	50	Central Ave/SR 9	N of Big Basin Way/SR 236
25	State Park Dr	S of Soquel Dr			
26	Gross Rd	W of 41st Ave	S:South, N:North, E:East, W:West		

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Locations of AADT Data gathered from Big Data sources

No	Location	Description
1	41st Ave	North of Portola Dr
2	Ramp	Westbound - S of Cory St
3	SR-1 NB West Of Bay	E of Capitola Mall Interchange,
4	Bonita Dr	Freedom Blvd And Vista Del Mar Dr
5	Freedom Blvd	East of Green Valley Rd
6	17th Ave	S of Kinsley St
7	30th Ave	N Or Roland Dr
8	Soquel Dr	Between Capitola Ave And Rosedale Ave
9	Soquel Dr	Between Capitola Rd And 7th Ave
10	Soquel Dr	E of Perimeter Rd, W of Haas Dr.
11	Mount Hermon Rd	W of Lockewood Ln
12	Laurel St	East of Front St
13	High St	Cl Se/High View - Western Dr
14	Bear Creek Rd	N Flat St, S of Mountain St
15	Water St	N Branciforte Ave - Poplar Ave
16	41st Ave	N of Clares St
17	Wharf Rd	Cliff Dr - Capitola Rd
18	Portola Dr	E of Laurel Ave, S of Nova Dr
19	Capitola Rd	W of 30th Ave
20	Soquel Dr	Between Mattison Ln And Rodeo Gulch Rd
21	Eaton St	Between Lake Ave And Lago Ln
22	Soquel Ave	Between Capitola Rd And 7th Ave
23	Capitola Rd	7th Ave And 17th Ave
24	Capitola Rd	W of El Dorado Ave
25	7th Ave	S of Mello Ln
26	Brommer St	E of 7th Ave
27	Ocean St	Soquel Ave - Broadway
28	State Hwy 1	Between Morissey And Soquel
29	Mcgregor Dr	E of Potbelly Beach Rd
30	Rodriguez St	Main St - W Lake Ave
31	S Green Valley Rd	Lawrence Rd - Freedom Blvd
32	Hwy 1	E of 41st Ave Interchange
33	Hwy 1	E of 41st Ave Interchange
34	Hwy 1	E of Park Ave
35	State Hwy 1	Between Freedom Blvd And San Andreas Rd
36	41st Ave	41st Ave Interchange
37	41st Ave	Sprr - Clares St
38	Glenn Coolidge Dr	Coolidge Dr North of High St
39	Airport Blvd	Ross Ave - Roache Rd
40	Main St	W of Rodriguez St
41	Freedom Blvd	S of Altavista Ave
42	Bay St	S of Meder St
43	State Hwy 1	E of Park Ave
44	N Rodeo Beach	N of Soquel Dr

S:South, N:North, E:East, W:West

Appendix B
Tests performed for all links

Link Volume	M/C
> 50,000	1.09
25,000 - 49,999	1.18
10,000 - 24,999	1.04
5,000 - 9,999	1.05
2,500 - 4,999	1.28
1,000 - 2,499	1.39
< 1,000	1.42

Link Volume	%RMSE	FHWA threshold	Target
> 50,000	10%	< 21%	< 20%
25,000 - 49,999	20%	< 22%	< 25%
10,000 - 24,999	22%	< 25%	< 25%
5,000 - 9,999	36%	< 29%	< 45%
2,500 - 4,999	64%	< 36%	< 100%
1,000 - 2,499	92%	< 47%	< 100%
< 1,000	171%	< 60%	< 100%

Facility Type	M/C
Other Freeways or Expressways	1.16

RMSE by Facility Type		
Facility Type	%RMSE	Target
Other Freeways or Expressways	22%	<20%
Ramp	39%	N/A
Principal Arterial	34%	<35%
Minor Arterial	41%	<45%
Major Collector	45%	<100%
Minor Collector	76%	<100%
Local	77%	<100%

Appendix C
Tests performed for Screenlines

Model/Count by ADT Volume Groups	
Link Volume	M/C
> 50,000	N/A
25,000 - 49,999	1.26
10,000 - 24,999	1.14
5,000 - 9,999	0.94
2,500 - 4,999	1.23
1,000 - 2,499	0.86
< 1,000	1.23

RMSE by ADT Volume Groups			
Link Volume	%RMSE	FHWA Threshold	Target
> 50,000	N/A	< 21%	< 20%
25,000 - 49,999	28%	< 22%	< 25%
10,000 - 24,999	21%	< 25%	< 25%
5,000 - 9,999	28%	< 29%	< 45%
2,500 - 4,999	94%	< 36%	< 100%
1,000 - 2,499	65%	< 47%	< 100%
< 1,000	42%	< 60%	< 100%

Model/Count by Facility Type	
Facility Type	M/C
Other Freeways or Expressways	1.26
Principal Arterial	1.08
Minor Arterial	1.04
Major Collector	0.84
Local	0.96

RMSE by Facility Type	
Facility Type	%RMSE
Other Freeways or Expressways	28%
Principal Arterial	27%
Minor Arterial	77%

Appendix C: CEQA Transportation Analysis Small Project Screening Criteria for Santa Cruz County

Kimley»Horn

MEMORANDUM

To:	Fernanda Dias Pini, County of Santa Cruz, Community Development and Infrastructure
From:	Anais Schenk, AICP
	Michael Schmitt, P.E., AICP CTP, PTP, RSP_{2B}
Date:	June 30, 2025
Subject:	CEQA Transportation Analysis Small Project Screening Criteria for Santa Cruz County

This memorandum outlines the basis for utilizing a "small project" screening threshold in Santa Cruz County for evaluating transportation impacts under the California Environmental Quality Act (CEQA).

In 2013 Senate Bill 743 was passed and in December 2018 the Governor's Office of Planning and Research (OPR)—now known as the Governor's Office of Land Use and Climate Innovation (LCI)-released a Technical Advisory on Evaluating Transportation Impacts in CEQA (Advisory). Lead agencies were given until July 2020 to implement SB 743 within their CEQA process. This Advisory provided lead agencies with guidance on VMT assessment methodologies, thresholds of significance, mitigation strategies, and screening criteria. While it is not required to be followed by law, the Advisory serves as a widely accepted technical resource for jurisdictions developing CEQA-compliant transportation analysis procedures.

In July 2020, Santa Cruz County adopted formal VMT thresholds and methodologies, documented in *Analyzing Vehicle Miles Traveled for CEQA Compliance: SB 743 Implementation Guidelines for the County of Santa Cruz* (County Guidelines). The County Guidelines closely follow the Advisory, incorporating recommended thresholds and screening approaches, including the "small project" exemption based on trip generation.

Specifically, the Advisory includes a screening threshold for "small projects" that states:

> "Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact."[1]

[1] California Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

CEQA Exemptions

The "small project" statement in the Advisory includes a citation referencing CEQA Guidelines, §15301, subd. (e)(2) which provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet so long as the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan and the area in which the project is located is not environmentally sensitive. It is presumed that the logic behind the use of 110 trips used in the Advisory was based on using ITE rates for 10,000 square feet as provided for in this exemption.

Additionally, CEQA Guidelines, § 15303, subd. (c) provides a similar exemption for the construction of up to four new stores, motels, offices, or restaurants not exceeding 10,000 square feet in Census defined urban areas. Therefore, projects would qualify for this exemption assuming they meet the conditions as outlined in §15303, subd. (c): the site on which the project is located is zoned for the proposed use, the project does not use significant amounts of hazardous materials, all necessary public services and facilities are provided, and the surrounding area is not environmentally sensitive.

Local Trip Equivalency to ITE

While ITE rates are widely used, they have occasionally been challenged in court for not being representative of local conditions. To assess the suitability of ITE for local conditions in Santa Cruz County, trip patterns derived from Replica were extracted as a comparison point to ITE.

For single-family residential uses, ITE reports an average of 9.43 daily trips per dwelling unit (ITE Land Use Code 210), based on over 170 studies. Replica data for similar residential uses in Santa Cruz County produced an identical rate of 9.43 daily trips, demonstrating strong consistency between the national ITE standards and locally modeled conditions by Replica.

Replica was also used to validate ITE rates for small office buildings under 10,000 square feet. The sample included 86 office buildings, constituting 52% of the total study sample, as identified using assessor parcel data[2]. Results indicated an average of 46.8 weekday trips per office. These findings demonstrate that office buildings of this size are well below the 110-trip threshold, reinforcing the appropriateness of applying ITE rates in Santa Cruz County.

Conclusion

Santa Cruz County's use of a 110-trip-per-day small project screening threshold for CEQA transportation analysis was originally adopted using state guidance. After reviewing applicable CEQA exemptions as cited by the Advisory as well as cross-validating ITE and Replica data - demonstrating consistency between national trip rates and locally modeled travel behavior - this analysis supports the continued use of the 110-trip threshold as a metric for determining eligibility for CEQA exemption of small projects in Santa Cruz County.

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[2] Santa Cruz County Geographic Information Systems (GIS). Available at: https://www.santacruzcountyca.gov/departments/geographicinformationsystems(gis).aspx