

County of San Diego

Transportation Study Guidelines



Adopted – January 2026

APPROVAL

I hereby certify that the **County of San Diego Transportation Study Guidelines**, which were adopted by the County Board of Supervisors on January 14th, 2026, and are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning & Development Services, in coordination with the Director of Public Works on the 14th day of January, 2026.

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I hereby certify that these **County of San Diego Transportation Study Guidelines** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer of the Land Use and Environment Group on the 14th day of January, 2026. The Director of Planning & Development Services is authorized to approve revisions to these County of San Diego Transportation Study Guidelines, which includes periodic updates to the SANDAG Regional Model and Infill Screening Maps. Any revisions to the CEQA VMT thresholds of significance contained in Section 3 CEQA Requirements for Transportation VMT must be approved by the County of San Diego Board of Supervisors.

Approved: January 14, 2026

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List of Abbreviated Terms

ATP	Active Transportation Plan
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
County	County of San Diego
CSTDMM	California Statewide Travel Demand Model
CTMP	Community Trails Master Plan
DER	Design Exception Request
DOT	Department of Transportation
DPW	Department of Public Works
EIR	Environmental Impact Report
FHWA	Federal Highway Administration
FLMA	Focused Local Mobility Analysis
GHG	greenhouse gas
GPA	General Plan Amendment
HCM	Highway Capacity Manual
ICE	intersection control evaluation
ITE	Institute of Transportation Engineers
IX	internal-to-external
LMA	Local Mobility Analysis
LOS	Level of Service
MTS	Metropolitan Transit System
MUTCD	Manual on Uniform Traffic Control Devices
MXD	mixed-use development
NCTD	North County Transit District
O-D	origin-destination
OPR	Governor's Office of Planning and Research
PCE	passenger car equivalent
PDS	County Planning & Development Services
PHF	peak hour factor
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SB	senate bill
SCS	Sustainable Communities Strategy
TAZ	transportation analysis zone
TDM	transportation demand management
TSG	Transportation Study Guidelines
TSM	transportation system management
XI	external-to-internal
XX	external-to-external

Definitions

Average Daily Traffic - The average 24-hour traffic volume at a given location.

Active Transportation Plan - The County's Active Transportation Plan (2018) supports efforts to promote active transportation through pedestrian and bicycle improvements in the unincorporated county.

Capacity - The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Climate Action Plan - The County's Climate Action Plan sets forth strategies and measures to reduce greenhouse gas emissions in the county's unincorporated areas and from County operations.

California Environmental Quality Act - The California Environmental Quality Act requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible.

Community Trails Master Plan - The County Trails Program facilitates the development of a system of interconnected regional and community trails and pathways.

Greenhouse Gas - Greenhouse gases are those gases in the atmosphere that have an influence on the earth's energy balance by trapping heat.

General Plan Amendment - General Plan Amendments are required for development projects with a land use or density that is not permitted by the General Plan.

Induced Travel - Induced travel or the VMT attributable to a transportation capacity increase is the increased amount of vehicle travel that is caused by the highway capacity increase.

Local Mobility Analysis – An evaluation that takes place *outside of CEQA* to assess the effects of a proposed development project on traffic operations and safety for the roadway network in the proximate area of the project.

Level of Service – Level of Service is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on delay or density.

Sustainable Community Strategy – A Sustainable Community Strategy (SCS) is a document produced by all California metropolitan planning organizations required by Senate Bill 375. The SCS must provide planning information to demonstrate that transportation, housing, and land use decisions align with the California Air Resources Boards (CARB) GHG emissions reduction targets. SANDAG is our region's metropolitan planning organization.

SANDAG Regional Plan - The Regional Plan provides a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources. The SANDAG Regional Plan includes the region's SCS.

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) – The RTP/SCS is produced by SANDAG and complies with federal requirements for the development of regional transportation plans, retains air quality conformity approval from the U.S. Department of Transportation, and preserves funding for the region's transportation investments. .

Transportation Analysis Zone (TAZ) – TAZs are units of geography used in the Travel Demand Model and contain critical information; such as, the number of automobiles per household, household income, and employment that is utilized to further understand of trips that are produced and attracted within the zone.

Transportation Demand Management – Various strategies that result in more efficient use of transportation resources with the goal of reducing VMT.

Travel Demand Model - A travel demand model is any relatively complex computerized set of procedures for predicting future trip making as a function of land use, demographics, travel costs, the road system, and the transit system.

Vehicle Miles Traveled (VMT) - The number of miles traveled by motor vehicles on roadways in a given area over a given time period.

1. Introduction

1.1. Background

The County of San Diego previously adopted “*Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic*” in 2006, with revisions and modifications approved in 2007, 2009, 2010 and 2011. Revisions and modifications focused primarily on metrics related to vehicle delay through Level of Service (LOS). These Guidelines presented an evaluation of quantitative and qualitative analyses and objective and predictable evaluation criteria and performance measures for determining whether a land development project or a public project like a community plan has a significant traffic impact on the environment pursuant to the State California Environmental Quality Act (CEQA), as well as a determination of the required level of CEQA analysis.

CEQA Changes

Senate Bill 743 (SB 743) was signed into law on September 27, 2013 and changed the way that public agencies evaluate transportation impact under CEQA. A key element of this law is the elimination of using auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant transportation impacts under CEQA. The legislative intent of SB 743 was to “more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas (GHG) emissions.” According to the law, “traffic congestion shall not be considered a significant impact on the environment” within CEQA transportation analysis.

In response, the Governor’s Office of Planning and Research (OPR) updated CEQA Guidelines to establish new criteria for determining the significance of transportation impacts. Based on input from the public, public agencies, and various organizations, OPR recommended that Vehicle Miles Traveled (VMT) be the primary metric for evaluating transportation impacts under CEQA. VMT measures the number of vehicle trips generated and the length or distance of those trips. For instance, if one vehicle drives ten miles from home to the grocery store, that trip generated ten VMT. If three vehicles each drive ten miles to the grocery store, then they collectively generate 30 VMT. VMT is generally expressed as VMT per capita for a typical weekday. Typically, projects that are farther from other complementary land uses, such as jobs and commercial activities and in areas without transit or active transportation infrastructure (bike lanes, sidewalks, etc.) generate more driving than development near complementary land uses with more robust transportation options.

SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., General Plan), studies, congestion management and transportation improvements, but these metrics may no longer constitute the basis for transportation impacts under CEQA analysis as of July 1, 2020. For example, in the County, the General Plan identifies LOS as being a required analysis, and even though it will no longer be a requirement of CEQA, unless the General Plan is amended, LOS will continue to be analyzed as part of project review.

In response to changes in State law, the County has developed a Transportation Study Guide (TSG) to identify requirements for both CEQA VMT analysis and discretionary entitlement non-CEQA Local Mobility Analysis (LMA) to replace the previously adopted *“Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic”*

County General Plan Goals and Policies

The County’s General Plan was adopted in August of 2011, before the passage of SB 743. Therefore, the Mobility Element was developed and planned based on the previous LOS requirements under CEQA. In addition to text in the Mobility Element that relates to transportation, there are also related goals in the Land Use, Housing, and Conservation and Open Space elements. For a list of General Plan goals related to transportation and assessing transportation impacts, please see **Appendix I**.

While SB 743 requires that LOS no longer be used for transportation impact assessments under CEQA, the General Plan contains policy M-2.1, which requires development projects to achieve a LOS “D” or better on all Mobility Element roads. The TSG proposes a methodology to meet the County General Plan requirement for LOS “D”, outside of CEQA. The LMA provides a methodology to identify development-related circulation and access deficiencies, and specific operational, road safety, and adequate transportation infrastructure improvements to maintain LOS “D” with the addition of new projects.

Future actions by the County Board of Supervisors may include changes to the General Plan to complement the standards and methods of analysis contained in this TSG. In particular, changes to the Mobility and Land Use elements will most directly enhance the County’s desired application of VMT.

County Climate Action Plan and Active Transportation Plan

The County Climate Action Plan (CAP), adopted in February 2018, and the County Active Transportation Plan (ATP), adopted in October 2018, also support the intent of SB 743. The CAP has two GHG emissions reduction strategies related to VMT. CAP Strategies T-1 and T-2 focus on reducing VMT and shifting towards alternative modes of transportation, focusing density in unincorporated villages, conserving open space and agricultural lands, and implementing infrastructure improvements to provide for active transportation. A transportation demand management (TDM) ordinance, being developed as a measure of the CAP, will be an important tool for non-residential projects to use when mitigating VMT impacts while also reducing GHG emissions. The CAP and ATP identify capital improvements related to pedestrian and bicycle infrastructure improvements that SB 743 mitigations could fund in the future.

1.2. Purpose

The TSG provides criteria on how projects should be evaluated for consistency related to the County’s transportation goals, policies and plans, and through procedures established under CEQA. The TSG establishes the contents and procedures for preparing a Transportation Study in the County of San Diego. The TSG aids in determining appropriate mitigation under CEQA, as well as site specific improvements to the transportation system to accommodate project traffic.

Reasons to perform a transportation study:

- Provide information to the public and decision-makers. Implement CEQA and County General Plan policies.
- Provide a method for analyzing the transportation effects of development projects.

- Provide applicants and county staff with transportation-related project and site planning recommendations.
- Establish a framework for transportation mitigation measures and project conditions for plans and projects.

1.3. Objectives

The following objectives are intended to provide consistency between local, regional and state policies in forecasting, describing and analyzing the effects of land development on transportation and circulation for all transportation modes and users:

- Provide clear direction to applicants, consultants, and county staff to better meet expectations, increase the efficiency of the review process, and minimize delays.
- Provide scoping procedures and recommendations for early coordination during the planning/discretionary phases of a land development project.
- Provide guidance in determining when, what type, and how to prepare a Transportation Study.
- Help achieve consistency, uniformity and accuracy in the preparation of a Transportation Study.
- Promote quality assurance in transportation studies by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies.
- Provide consistency and equity in the identification of measures to mitigate the transportation impacts generated by land development.
- Assist County staff in developing objective recommendations and project conditions of approval as part of the land development discretionary review process.
- Help to ensure that County transportation studies are in conformance with all applicable County, region and state regulations, including legislative requirements as part of CEQA.

1.4. CEQA vs. Non-CEQA Transportation Analysis

The County TSG is a comprehensive manual for both CEQA VMT analysis and discretionary/ entitlement non-CEQA Local Mobility Analysis (LMA). The TSG provides guidance for the two elements of transportation analyses needed to comprehensively assess the potential effects from new development to the County's roadway and mobility system.

CEQA Transportation Analysis (VMT Analysis)

CEQA requires VMT analysis for compliance with state policies to evaluate a project's potential impacts related to VMT significance criteria. The VMT analysis will:

- Enable proposed development projects to comply with current CEQA requirements as a result of the implementation of SB 743.
- Outline the County's VMT significance thresholds, screening criteria, and methodology for

conducting the transportation VMT analysis.

- Help determine if mitigation is required to offset a project's significant VMT impacts.
- Identify VMT reduction measures and strategies to mitigate potential impacts below a level of significance.
- Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

Non-CEQA Transportation Analysis related to General Plan Requirements

Site Access Scoping Review

A Site Access Review is required by the County of San Diego for all projects. A Site Access Review is conducted by County staff and the applicant as part of the Scoping Review to confirm safe ingress and egress between the project site and public transportation network. Site access driveways and/or the intersection(s) that provides access to County Public Roads are included in the Scoping Review.

Local Mobility Analysis (LMA)

An LMA is required by the County General Plan to assess transportation effects and ensure orderly development, public safety, adequate infrastructure, and consistency with the General Plan. The LMA analysis will:

- Ensure that the local transportation system is adequate to serve the project and that improvements identified in the General Plan are constructed when needed consistent with the County's Public Road Standards.
- Address issues related to operations and safety for all transportation modes.
- Ensure consideration and potential conditioning of the County's Active Transportation Plan for bicycle and pedestrian facilities.
- Identify the necessary operational transportation entitlement conditions for County-initiated and land development projects.
- Outline the County's screening criteria, study area, and methodologies to assess the potential need for off-site operation and safety improvements to the project study area transportation network.
- Establish measures of effectiveness to maintain transportation LOS consistent with the County's General Plan Mobility Element.
- Facilitate on-site project access and roadway frontage design infrastructure improvements to serve the project and the surrounding community.

1.5. Process Overview

The TSG is intended for use by County staff, project applicants, consultants, other agencies/jurisdictions, as well as the general public and decision makers, to evaluate transportation effects of proposed land development projects going through the environmental and discretionary planning/entitlement process within the jurisdiction of the County of San Diego.

Preparer Qualification Requirements

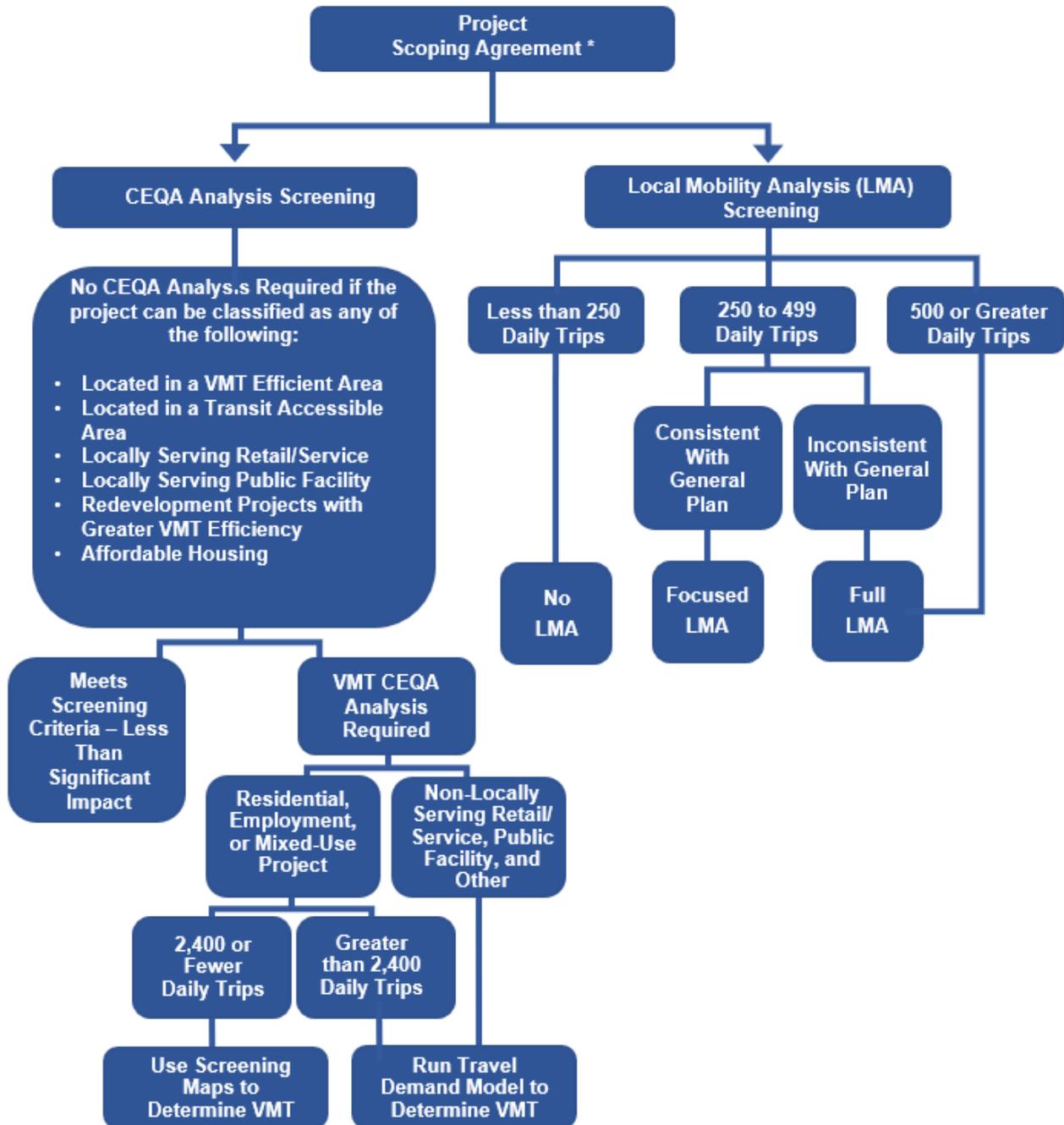
Transportation Studies must be prepared under the supervision of a registered Traffic Engineer who has specific training and experience in preparing transportation studies. All transportation studies must be stamped by a California Registered Traffic Engineer or equivalent as approved by County Planning & Development Services (PDS) or Department of Public Works (DPW).

County Review and Outside Agency Coordination

Transportation Studies for land development projects will be reviewed by County PDS and DPW.

If a County project affects another agency or jurisdiction, such as Caltrans, SANDAG, MTS, NCTD, or neighboring cities, coordination with that agency or jurisdiction may be required and will be identified in the scoping review process. County of San Diego staff can provide guidance and contact information for other agencies or jurisdictions.

FIGURE 1 – SCOPING FRAMEWORK FOR TRANSPORTATION STUDIES



*A project may require: LMA analysis only, CEQA analysis only, LMA and CEQA analysis, or no LMA or CEQA analysis

Outline of Study Preparation and Review Process

The following summarizes the typical process for completing a Transportation Study in the County of San Diego:

- **Step 1 – Determine Study Requirements:** The applicant completes a Scoping Agreement for Transportation Studies (Appendix A – Scoping Agreement for Transportation Studies) that summarizes the proposed project description, location, site plan, site access, estimated trip generation and trip distribution, study area, methodology requirements, and any other specific issues to be addressed in the Transportation Study. The Scoping Agreement also includes preliminary screening criteria to determine if the project is screened out from CEQA Transportation Analysis and information to determine if a LMA is required.
- **Step 2 – Scoping Review and Agreement:** The completed project Scoping Agreement is submitted to the County of San Diego, along with the required fee deposit for review and approval. The County will either provide a letter confirming the Scoping Agreement or communicate other requirements. The applicant's consultant may request a meeting to clarify the draft work scope and the County's feedback. The Scoping Agreement will determine the type of Transportation Study that will be needed.
- **Step 3 – Conduct Transportation Study and Submit Draft:** The applicant's consultant will prepare the Transportation Study consistent with the requirements established in Steps 1 and 2 (and as outlined in the TSG) and will submit a draft to the County (Appendix B – Transportation Impact Study Format). The County will provide written comments on the draft study. During this process, the applicant's consultant may request a meeting with County staff to clarify study requirements or comments received on the draft study.
- **Step 4 – Submit Final Transportation Study:** The applicant's consultant will address all County comments and produce a Final Transportation Study to be approved by staff. Multiple iterations of study review may be necessary to adequately address all staff comments. It is critical that staff and the traffic consultant coordinate closely during the review process to ensure productive and efficient communications in achieving the mutual goal to finalize the Transportation Study. A record identifying how each comment was addressed should also accompany the Final Transportation Study. Depending on whether the Transportation Study included a VMT analysis, a LMA, or both, the final mitigation recommendations or improvements will be either in the CEQA Findings and/or the discretionary Conditions of Approval.

The County may update the TSG on an as-needed basis to reflect the best state of practice methodologies and changes in CEQA requirements. As such, the County will continually review the TSG for applicability and coordinate with other jurisdictions and professionals to ensure the most recent guidance and best practices are being applied for land development review and transportation analysis.

The TSG is not binding on any decision-maker and should not be substituted for the use of independent professional judgment and evaluation of evidence in the record. The County also reserves the right to request further, project specific, information in its evaluation that may not be identified or described in this document.

2. Transportation Study Initiation

If a project requires a discretionary action, the applicant and County staff will determine the Transportation Study requirements according to the TSG.

The Transportation Study process begins with the applicant's consultant filling out a Scoping Agreement form (**Appendix A**), which serves as an application for transportation study scoping.

2.1. Types of Transportation Studies

CEQA and LMA requirements should be determined separately, as CEQA VMT analysis and/or LMA may apply to any type of transportation study. The following types of transportation studies (or a combination) may be required:

1. **No Transportation Analysis Required:** If a project meets screening criteria for CEQA VMT analysis and LMA, a Transportation Study will not be required.
2. **CEQA VMT Analysis Only:** Transportation studies where only CEQA VMT analysis is required because the project meets LMA screening criteria.
3. **LMA Only:** Transportation studies where only an LMA (Focused LMA or Full LMA) is required because the project meets CEQA VMT screening criteria.
4. **CEQA VMT and LMA Analysis:** Transportation studies that include both CEQA VMT analysis and a LMA (Focused LMA or Full LMA). This is required for projects that are not screened out based on the County's screening criteria outlined in following section.

2.2. Transportation Study Screening Criteria

Discretionary and County-initiated projects may need to complete a Transportation Study as identified in Tables 1 and 2. A project's consistency with the General Plan, estimated daily trips, project location, and other project characteristics will determine the type of study that is required based on the CEQA VMT and LMA screening criteria presented in Tables 1 and 2, respectively.

TABLE 1 – CEQA VMT SCREENING

CEQA VMT Screening Criteria	
1. Projects Located in VMT Efficient Areas Based on Regional Average	<ul style="list-style-type: none"> Region being defined by OPR as the MPO/RTPA geographical Boundary Use location-based screening maps (consistent with project land uses)
2. Locally Serving Retail Projects	<ul style="list-style-type: none"> Projects that are 50,000 square feet or less
3. Locally Serving Public Facilities	<ul style="list-style-type: none"> Public facilities that serve the local community including transit centers, public schools, libraries, post office, park-and-ride lots, other government offices, parks/trail heads, emergency shelters, and passive public uses.
4. Redevelopment Projects with Lower Total VMT	<ul style="list-style-type: none"> The proposed project’s total daily project VMT is less than the existing land use’s total daily VMT.
5. Affordable Housing	<ul style="list-style-type: none"> 100% affordable housing

TABLE 2 – TYPE OF LMA BY DAILY PROJECT TRIPS

	Focused LMA	Full LMA
Consistent with General Plan	250 – 499 Daily Trips	500 or Greater Daily Trips
Inconsistent with General Plan	N/A	250 or Greater Daily Trips

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken.

Types of LMAs

- **Focused Local Mobility Analysis:** Applies only to a project consistent with the General Plan and forecast to generate 250 to 499 daily trips. A Focused LMA analysis is conducted for such projects to confirm that the project does not have an effect on the safety and operations of the transportation system and does not require a Full LMA.
- **Full Local Mobility Analysis:** Applies to a project consistent with the General Plan and forecast to generate 500 or more daily trips, or a project that is inconsistent with the General Plan and is forecast to generate over 250 daily trips. A Full LMA is required to ensure traffic operations and safety of the roadway network in the proximate area of the project, as well as ensure the local transportation system is adequate to serve the project and is consistent with County General Plan goals and policies.

2.3. Completing the Scoping Agreement Form

The applicant's consultant will prepare a Scoping Agreement (**Appendix A**) before coordinating with the County. This ensures that all the information necessary to determine study requirements is compiled and readily accessible.

The following main items are required to complete the Scoping Agreement:

Project Location

- Project location & vicinity map.
- Project Community Planning Area.
- Zoning and community plan land use designation of the project site (demonstrate consistency).

Detailed Project Description

- Land uses and intensities.
- Gross parcel acreage and net developable acreage or building square footage or number of proposed residential units.
- Number of parking spaces: vehicle (including accessible spaces), bicycle (racks and secure storage), motorcycle.

Site Plan

- Driveway locations and access type (ex. Full access, partial access, right in/out only).
- Pedestrian access, bicycle access and on-site pedestrian circulation.
- Location/distance of closest existing transit stop (measure as walking distance to project entrance/or middle of parcel).
- Location of any planned trails identified in the CTMP within ¼ mile of the project location.

CEQA Transportation Analysis Screening

- Project Type Screening
- Project Location Screening

LMA Study Area and Scenarios

- Study area and scenarios for LMAs are discussed further in Chapter 4.

LMA Trip Generation and Distribution

- Identify the number of new daily and peak hour driveway vehicle-trips added by the project as described in this section.
- Trip generation rates are commonly expressed in trips per unit of development – for example, trips per housing unit or trips per thousand square feet – and are derived by averaging trip generation data collected from existing land uses.

For San Diego County, the following trip generation sources should be used:

- The current edition of the Institute of Transportation Engineer's Trip Generation Manual and Trip Generation Handbook. The Trip Generation Manual provides average trip generation rates for a wide variety of land-use categories that is a nationally recognized transportation planning data source and industry standard.
- The (not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. This guide provides average trip generation rates for a variety of land-use categories based on data collected solely within the San Diego region.
- For unique land uses, trip generation should be derived from locally observed data that include trip generation samples from at least three (3) similar facilities. The facilities selected as samples should be approved by County Staff prior to data collection.
- For existing facilities that are being expanded, trip generation should be determined by surveying the existing use to generate a project specific trip generation rate.
- The most detailed project information should be used to determine a project's trip generation estimate. For example, if the project's building square footage and the project acreage are both known, the building square footage is more detailed; therefore, should be used to estimate the trip generation.

Distribution of project trips throughout the study area can be estimated using two methods:

- Manual estimation using existing traffic volumes, location of complementary land uses, and engineering judgement. The trip distribution should be clearly communicated on a map that shows the percent of project traffic on each roadway in the vicinity of the project site. Manual estimation is appropriate for projects performing a Site Access Study, Focused LMA, or project's that generate less than 1,000 daily trips.
- Use the current version of the SANDAG Regional Travel Demand Model to perform a select zone analysis. The SANDAG Regional Travel Demand Model should be used to determine the trip distribution for projects that generate 1,000 or greater daily trips.

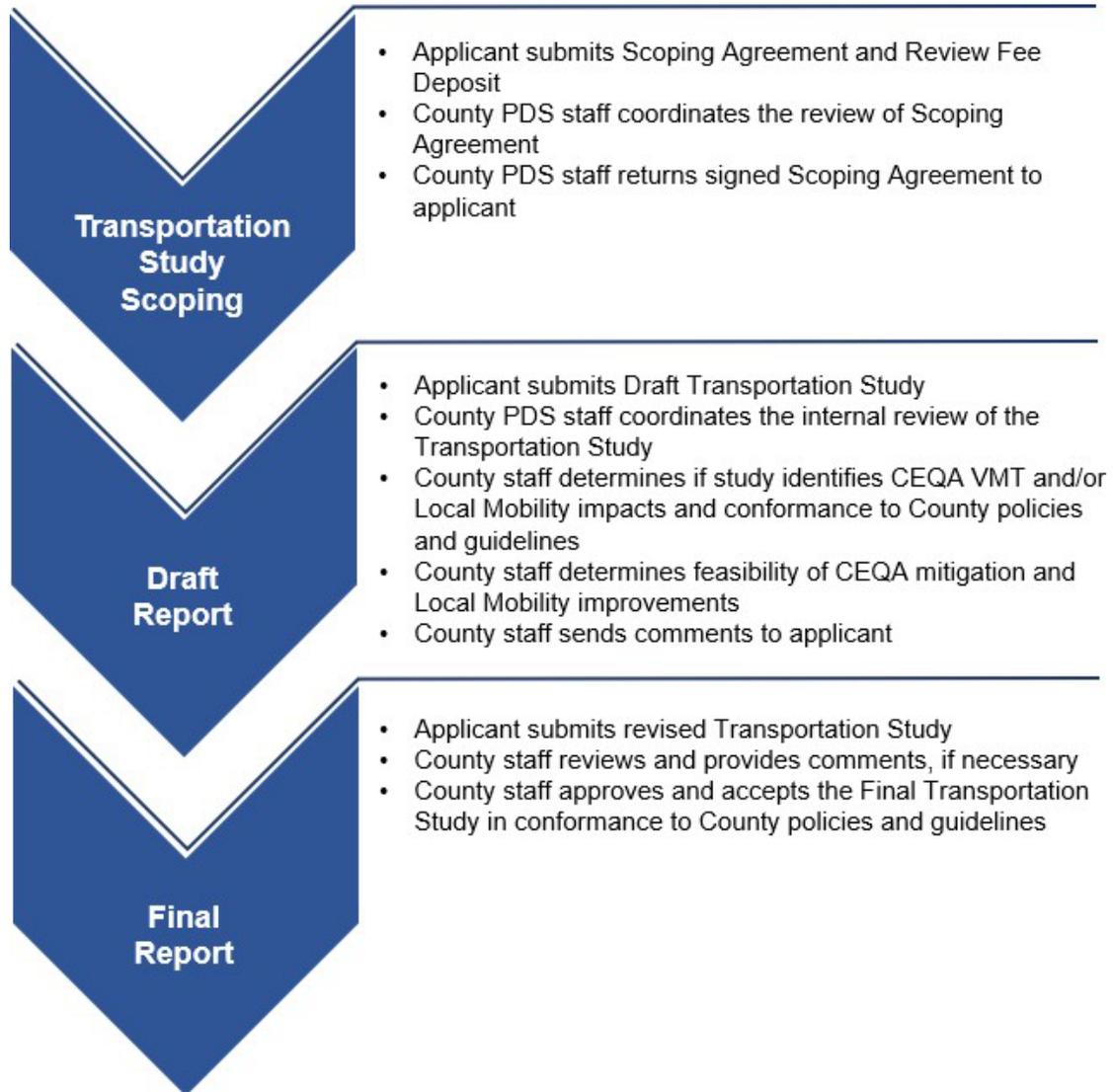
Additional information on trip generation, including trip reductions are discussed further in Chapter 4.

2.4. Submittal Instructions

The Scoping Agreement will be submitted as follows:

1. Scoping Agreement will be submitted to Planning & Development Services by the Applicant/Consultant. The Scoping Agreement form is available on the County PDS website (<https://www.sandiegocounty.gov/content/sdc/pds.html>).
2. Applicant/Consultant submits a completed Scoping Agreement including a fee deposit.
3. Staff begins the Scoping Agreement review and approval processes.
4. Staff sends a completed and signed Scoping Agreement to the Consultant.
5. Consultant submits a draft Transportation Study including a fee deposit.
6. Staff completes initial review.
7. If required, comments are submitted to the consultant and a revised Transportation Study is submitted. Additional review cycles may be required.
8. Upon completion, staff issues a final notice to the Applicant and the final Transportation Study is accepted for public review.

FIGURE 2 – TRANSPORTATION STUDY PROCESS OVERVIEW (PROJECT PLANNING REVIEW)



3. CEQA Requirements for Transportation VMT

3.1. Overview

SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing LOS with VMT and providing streamlined review of land use and transportation projects that will help reduce future VMT growth. This shift in transportation impact focus is expected to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Office of Planning and Research (OPR) published its latest Technical Advisory on Evaluating Transportation Impacts in CEQA to the California Natural Resources Agency in December 2018. This Technical Advisory provides recommendations on how to evaluate transportation impacts under SB 743. These changes include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant CEQA transportation impacts. CEQA Guidelines section 15064.3 states that "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts" and the OPR guidance recommends the use of VMT as the preferred CEQA transportation metric. SB 743 includes the following two legislative intent statements:

1. "Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act."
2. "More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions."

To comply with the new legislation, the County of San Diego has identified VMT analysis methodology, establishment of VMT thresholds for CEQA transportation impacts, and identification of possible mitigation strategies. The VMT analysis will:

- Enable proposed development projects to comply with current CEQA requirements as a result of the implementation of SB 743.
- Describe the County's CEQA significance thresholds, screening criteria, and methodology for conducting the transportation VMT analysis.
- Determine if mitigation is required to offset a project's significant VMT impacts.

- Identify VMT reduction measures and strategies to mitigate potential impacts below a level of CEQA significance.
- Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. VMT does not directly measure traffic operations but instead is a measure of network use or efficiency, especially if expressed as a function of population or employment (i.e., VMT per Resident). VMT tends to increase as land use density decreases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations. VMT also serves as a proxy for impacts related to energy use, air pollution emissions, GHG emissions, safety, and roadway maintenance. The relationship between VMT and energy or emissions is based on fuel consumption. The traditional use of VMT in environmental impact analysis is to estimate mobile air pollution emissions, GHGs, and energy consumption.

3.2. Metrics and Methodology for Calculating VMT

Typically, transportation VMT analysis for CEQA should be conducted using the SANDAG Regional Travel Demand Model; however, other tools for conducting VMT analysis may be preferred depending on the project characteristics and the sensitivity of the SANDAG model in the project location and for the project type.

The SANDAG model is updated every 3-4 years to reflect existing conditions, the cost of driving, observed travel patterns, and policy changes. In addition, the updates utilize the latest in software versions and state-of-the-practice for modeling. Typically, the model is updated at the same time SANDAG updates the regional transportation plan; however, minor updates occasionally occur outside of the 3-4 year major update. The current version of the SANDAG model is called Activity Based Model (ABM) 2+. This model became the current model in December 2021 at the time the SANDAG Board adopted the Regional Plan.

The SANDAG model provides VMT per Resident and VMT per Employee data for the areas within the SANDAG region (the San Diego County boundary). As is true for all travel demand models, the SANDAG model has limitations in including VMT from outside of the County boundary. The SANDAG model output for VMT per Resident and VMT per Employee does not include any VMT generated by residents or employees outside of the SANDAG region. Furthermore, it does not include any VMT for people who work within San Diego County but live outside of the region (for example, some living in Temecula who works in Escondido is not accounted for). The County's VMT maps adjust for the external VMT using the California Statewide Travel Model. Note that the maps do not adjust for VMT in Mexico because the data is not available. Additional information about adjusting the metrics for external VMT is provided below.

The model outputs can be used to produce VMT per Resident, VMT per Employee, Total VMT per Service Population, and Total VMT. Any other model used for VMT analysis shall be approved by PDS staff prior to submittal.

VMT per Resident

VMT per Resident is established by summing up total daily VMT generated by residents of a geographic

area and dividing by the population of that geographic area. Total daily VMT includes all triptours made by residents: home-based and non-home-based trip tours (i.e., all VMT for a resident for the entire day regardless of trip purpose or origin/destination).

To analyze the VMT per Resident for a proposed project, total daily VMT generated by project residents is divided by the project resident population.

SANDAG has a procedure to produce VMT per Resident; however, the SANDAG procedure to produce this metric only includes VMT generated within the SANDAG region by residents of the SANDAG region. To account for VMT generated by residents of the SANDAG region traveling outside of the region, the SANDAG model data must be appended with the VMT that occurs by SANDAG region residents outside of the region. The steps necessary to include VMT from all trips that enter or exit the SANDAG region are explained in the Trip Length Adjustment section below.

VMT per Employee

VMT per Employee is established by summing the work related total daily VMT generated by resident employees¹ of a geographic area and dividing by the number of employees of that geographic area. Total daily VMT includes all work tours made by employees (this includes an employee's commute and any other work-related travel such as going to lunch or to a meeting). To analyze the VMT per Employee for a proposed project, the total work tour daily VMT produced by the project's employees is divided by the total number of employees.

The procedure developed by SANDAG to calculate VMT per Employee by TAZ only accounts for VMT generated within the SANDAG region by employees who are also residents of the SANDAG region. Employees that live outside of the region and travel into the SANDAG region for work are not accounted for in the SANDAG output. A procedure is applied to the SANDAG data to account for work related VMT that occurs outside of the region both for resident employees and for employees who live outside of the region. The County's VMT maps include this adjustment for external VMT.

VMT per Service Population

VMT per Service Population is established by dividing the total VMT with at least one trip end in a geographic area by the population plus employment of that geographic area. The total VMT includes all internal VMT, internal to external, and external to internal VMT (in other words all VMT regardless of geographic boundaries). Since this metric combines VMT for residents and employees and reflects how accessible all land uses are (for example, geographies with higher density, more shopping, and more jobs will have lower VMT per Service Population) it can be used to retail/service projects that are not considered *locally serving*. To analyze the VMT per Service Population for a proposed project, the project's total VMT is divided by the project population plus employment.

¹ Resident employees both live and work in the SANDAG region.

Total VMT (Origin-Destination Method)

The total VMT (origin-destination method) within a geographic area can be calculated directly from model outputs by multiplying the origin-destination (O-D) trip matrix by the final assignment skims (O-D Method VMT). The total VMT value should be appended to include VMT from all trips that enter or exit the SANDAG region, as explained in the Trip Length Adjustment section below.

Total VMT (Boundary Method)

Total daily VMT within a given area can be measured by multiplying the daily volume on every roadway segment by the length of every roadway segment within the area. This is called Boundary Method VMT. Examples of Boundary Method VMT are VMT within the SANDAG region, VMT within a defined planning area, or VMT within the market area to be served by the project.

Trip Length Adjustments

Trip length adjustments for trips leaving the SANDAG Model Area can be made by using the California Statewide Travel Demand Model (CSTDM).

Adjusting the length of trips leaving a model boundary requires appending extra distance at the model gateway zone (or external centroid) connectors. This process results in new gateway distances that are weighted based on the amount and location of external travel origins and destinations.

The first step of this process is to determine trip volume leaving or entering the model boundary. These are referred to as internal-to-external (IX) and external-to-internal (XI) trips. This data can be generated either from O-D trip matrices or by conducting a select zone analysis to track trips to the model gateways. The volume at the gateways for this purpose should not include external-to-external (XX) through trips.

Determining the full length of trips leaving or entering a model boundary requires an O-D dataset that includes flows between the model area and the area external to the model. The California Statewide Travel Demand Model (CSTDM) should be used to develop the O-D dataset.

The next step requires determining the gateway(s) based on the SANDAG model which trips from the O-D data source would travel through. The trip length adjustment process ultimately requires calculating the weighted average distance beyond each model gateway. The process of calculating trip lengths external to the SANDAG model region for trips entering or exiting the SANDAG model area using the CSTDM is described below:

- Create correspondence between Study Area TAZs within SANDAG model to the Statewide Model TAZs.
- Add “Gate” attribute to CSTDM roadway network links and set “Gate” equal to “gateway id” only for those links identified as the locations corresponding to the SANDAG model gateways.
- Add “Gate_Dist” attribute to CSTDM roadway network links and set “Gate_Dist” equal to the link distance for those links outside the SANDAG model boundary. All the CSTDM roadway links inside the SANDAG model boundary will have a “Gate_Dist” attribute of 0.
- Run a highway skim on the CSTDM roadway network to skim the shortest travel time between each O-D pair, tracking the gateway and distance outside the SANDAG model boundary.
- For each gateway, summarize the average distance beyond the SANDAG model boundary

weighted by volume at each gateway.

- Tag the gateway distance from the above step using CSTDM to the gateways in the SANDAG model and multiply to the gateway volume from the SANDAG model to determine the gateway external VMT to the SANDAG model. Make sure not to double-count any overlap distance that's already accounted for in the VMT calculation from the SANDAG model.

Table 3 shows the base year (2012) weighted average distance beyond the SANDAG model boundary for trips passing through each model gateway, as calculated using the methodology above.

TABLE 3 – TRIP DISTANCES OUTSIDE SAN DIEGO COUNTY FOR ENTERING AND EXITING TRIPS

Route	Gateway		Distance Outside San Diego County (miles)	
	Route	County	IX Trips	XI Trips
I-8		Imperial	70.16	69.20
SR-78		Imperial	54.07	58.90
SR-79		Riverside	71.71	62.54
Pechanga Pkwy		Riverside	35.89	30.91
I-15		Riverside	24.86	24.81
I-5		Orange County	60.54	62.81

3.3. VMT Analysis for Land Use Projects

3.3.1. Screening Criteria for CEQA VMT Analysis

The requirements to prepare a detailed transportation VMT analysis apply to all land development projects, except those that meet at least one of the screening criteria. A project that meets at least one of the screening criteria below would have a less than significant VMT impact due to project characteristics and/or location.

On the County's website is a SB 743 Interactive Mapping Tool based on VMT Efficient Areas based on a Regional Geography and on defined Infill areas. Projects can use this tool to determine if their project would have a *less than significant* impact for VMT.

<https://www.sandiegocounty.gov/content/sdc/pds/SB743.html>

1. *Projects Located in a VMT Efficient Area*

Following guidance provided by OPR, a VMT efficient area is any area with an average VMT per Resident, VMT per Employee, or VMT per Service Population 15 percent below the baseline average for the entire San Diego County region, including the incorporated cities. Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per Resident, per Employee, or per Service Population, respectively, that is similar to the existing land uses in the VMT efficient area. Screening maps for each metric can be found in **Appendix C**.

Residential projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for residential projects is any area with an average VMT per Resident 15 percent below the baseline average for the entire San Diego County region, including the incorporated cities.

Employment projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for employment projects is any area with an average VMT per Employee 15 percent below the baseline average for the entire San Diego County region, including the incorporated cities.

Mixed-Use projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for mixed-use projects is any area with an average VMT per Resident **and** Employee that is 15 percent below the baseline average for the entire San Diego County region, including the incorporated cities.

Based on OPR Technical Advisory guidance, combining land uses for VMT analysis is not recommended. Different land uses generate different amounts of VMT, so the outcome of such an analysis could depend more on the mix of uses than on their travel efficiency. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold.

Retail/Service projects located within a VMT efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT efficient area for retail/service is any area with an average VMT per Service Population 15 percent below the baseline average for the entire San Diego County region, including the incorporated cities.

2. Projects Located in a Transit Accessible Area

Following guidance provided by OPR, projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor³ may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:

- Has a Floor Area Ratio of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the County.
- Is inconsistent with SANDAG's most recent Sustainable Communities Strategy (SCS).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

3. Locally Serving Retail/Service Projects

Following guidance provided by OPR, locally serving retail/service projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail/service generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

4. Locally Serving Public Facilities and Other Uses

Following guidance provided by OPR, public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use. The following are examples of locally serving facilities and uses:

- Transit centers
- Schools
- Libraries
- Post offices
- Park-and-ride lots
- Local health/medical clinics
- Law enforcement and fire facilities
- Open space preserves, Local parks and trailheads
- Government offices
- Communication and utility buildings
- Water sanitation buildings
- Waste management buildings

³ Major transit stop: 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 (PRC § 21064.3). High quality transit corridor: A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute periods (PRC § 21155).

7. Redevelopment Projects with Greater VMT Efficiency

Following guidance provided by OPR, where a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.

8. Affordable Housing

Following guidance provided by OPR, an affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100 percent of units are affordable.

Affordable housing developments produce fewer vehicle trips than equivalent market-rate developments. The 11th Edition of the ITE Trip Generation Manual provides trip generation rates for affordable housing units in addition to trip generation rates for market-rate units.

3.3.2. VMT Thresholds of Significance

Projects that do not meet the above screening criteria must include a detailed evaluation of the VMT produced by the project. The significance thresholds and specific VMT metric used to measure VMT are described by land use type below.

- **Residential:** 15 percent below the County Regional average VMT per Resident. This includes the entire San Diego County region, including the incorporated cities.
- **Employment (Office/Commercial/Industrial):** 15 percent below the County Regional average VMT per Employee, including the incorporated cities.
- **Retail/Service:** A net increase in total area VMT or 15 percent below the County Regional average VMT per Service Population, including the incorporated cities.
- **Mixed-Use:** 15 percent below the County Regional average VMT per Resident **and** Employee based on land use type (i.e., residential, office/commercial, and retail).
- **Regional Recreational:** A net increase in total regional VMT.
- **Regional Public Facilities:** A net increase in total regional VMT.
- **Other Project Types:** **Appendix E** provides a list with unique project types and identifies which land use category they fall within for analysis purposes.

For large land use plans, such as Specific Plans or Community Plan Updates the land use plan should be compared to the region overall. Comparison to the region is appropriate because large land use plans can have an effect on regional VMT (similar to how a regional retail project affects regional VMT). The following thresholds apply to large land use plans:

- **Residential:** Aggregate all residential land uses for the build-out year of the plan and compare the resulting build-out year VMT per Resident to the existing regional average. The threshold is 15 percent below the existing regional average VMT per Resident.
- **Employment:** Aggregate all employment land uses for the build-out year of the plan and compare the resulting build-out year VMT per Employee to the existing regional average. The threshold is 15 percent below the existing regional average VMT per Employee.

- **Retail/Service:** Evaluate the effect that adding these land uses has on regional VMT. The threshold is any increase in regional VMT.

3.3.3. VMT Analysis Procedures

For projects which meet one of the screening criteria for CEQA VMT analysis, no additional analysis is necessary. For projects that must conduct a VMT analysis, guidance is provided below on how to conduct transportation VMT analysis given the project type and number of driveway trips. Projects that generate less than 2,400 driveway trips can assume the VMT of the project’s TAZ. For larger developments, the project must be entered into the latest version of the SANDAG Travel Demand Model to determine the project’s average VMT.

Project Type	Determine Average VMT by Maps	SANDAG Modelling Required
Residential, Employment, or Mixed-Use	Less than 2,400 un-adjusted driveway trips	Greater than 2,400 un-adjusted driveway trips
Non-Locally Serving Retail/Service, Public Facility, or Other	N/A	All Projects

1. Residential Projects

For projects that generate less than 2,400 daily unadjusted (before taking adjustments for alternative modes and internal capture) driveway trips (e.g. 240 or less single-family residential units, 300 or less multi-family residential units, or 400 or less apartments): Identify the location of the project on the County’s Resident VMT per Resident map. The project’s VMT per Resident will be considered the same as the VMT per Resident of the TAZ it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project’s VMT per Resident.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model for SANDAG (year that is used to determine the VMT thresholds) to provide the project’s VMT per Resident. To perform the analysis, all project land uses should be input, and the VMT per Resident should be determined using the same method/scripts that SANDAG utilizes to calculate the VMT per Resident metric.

2. Employment Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the County's VMT per Employee map. The project's VMT per Employee will be considered the same as the VMT per Employee of the TAZ it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) for SANDAG to provide the project's VMT per Employee. To perform the analysis, all project land uses should be input, and the VMT per Employee should be determined using the same method/scripts that SANDAG utilizes to develop the VMT per Employee metric.

3. Retail/Service Projects

Calculate the change to area VMT using the SANDAG Travel Demand Model. To calculate the change in area VMT, the regional retail component of the project should be input into the travel demand model (year that is used to determine the VMT thresholds). The "with project regional retail" area VMT produced by the model run is compared to the "no project" area VMT.

Alternatively, if the project applicant chooses VMT per Service Population as their analysis metric, input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's VMT per Service Population. VMT per Service Population should be determined using the methodology described in Section 3.2.

4. Mixed Use Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the County's VMT per Resident and Employee maps. Based on the OPR Technical Advisory, each use should be analyzed separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold.

The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's VMT per Resident and Employee. Compare back to the appropriate threshold to determine if the impact is significant.

All project land uses should be input, and each individual project component should be evaluated per the appropriate metric based on land use type (i.e. residential, office/commercial, and retail) as described above.

5. Other Methods and Project Types

Input the project into the SANDAG Regional Travel Demand Model for SANDAG to provide the project's applicable VMT metric. To perform the analysis, all project land uses should be input, and the VMT metric that is appropriate based on the land use type should be determined using the methodology described in Section 3.2.

Applicants may also consider the use of other methods, particularly for unique land-use project types, that are not captured through the SANDAG Travel Demand Model for analyzing VMT. Other methods may include, but are not limited to, qualitative analysis, the use of "Big Data," more refined parcel-level analysis, or use of the SANDAG SB 743 VMT Maps, which uses Census Tracts and does not account for external VMT trips outside of the San Diego County boundaries; as a result, may differ slightly from the TAZ analysis methodology adopted as part of the County's TSG.

The CEQA Guidelines define a "threshold of significance" to mean "an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant." Substantial evidence means "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached."

Applicants that choose to deviate from the County's TSG will likely be subject to additional scrutiny on the substantial evidence and defensibility of findings of no significant VMT impacts, which may result in County staff not recommending approval. However, applicants can still at their discretion choose to take a project to Hearing despite not being recommended by County staff.

6. Apply VMT Reductions

If the project includes TDM measures, the reduction in VMT due to each measure shall be calculated and can be applied to the project analysis. There are several resources for determining the reduction in VMT due to TDM measures, such as the California Air Pollution Control Officers Association (CAPCOA) Quantifying GHG Mitigation Measures Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021), and the SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool (see Mitigation Section below).

The VMT reductions associated with project TDM should be applied to the appropriate metric(s) based on the project land uses. If the project does not include any TDM, then no reduction would be taken.

The resulting VMT values should be compared to the appropriate threshold in section 3.4 to determine whether the project results in a significant CEQA transportation impact due to VMT. Further information on VMT reduction and mitigation is provided in Section 3.5.

3.4. Cumulative VMT Impacts

Cumulative analysis is necessary to determine if a project contributes to future year VMT impacts. Since VMT is a composite metric that will continue to be generated over time, a key consideration for cumulative scenarios is whether the rate of VMT generation gets better or worse in the long-term. The SANDAG Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) demonstrates that VMT per resident and VMT per employee is expected to reduce over time and the RTP/SCS demonstrates how the SANDAG regional plan will meet State climate goals. If a project is consistent with the SANDAG RTP/SCS it is not necessary to perform separate cumulative VMT analysis since the RTP/SCS shows VMT rates reducing over time. If a project is not consistent with the RTP/SCS, a cumulative VMT analysis may be required.

The 2021 Regional Plan includes a Sustainable Communities Strategy (SCS), as required by California Senate Bill 375 (Steinberg, 2008) (SB 375), for the San Diego region. This SCS describes coordinated transportation and land use planning that exceeds the state's target for reducing per capita GHG emissions set by the California Air Resources Board. The state-mandated target is a 19% reduction—compared with 2005—in per capita GHG emissions from cars and light-duty trucks by 2035. The 2021 Regional Plan achieves a 20% reduction by then.

The following provides thresholds for cumulative conditions:

- Cumulative Threshold for Residential Projects: Project and VMT/Employee: The project 2050 VMT/Capita is 15 percent below the *existing*-Regional average VMT per Resident.
- Cumulative Threshold for Employment Projects: The project 2050 VMT/Employee is 15 percent below the *existing* Regional average VMT per Employee.
- Cumulative Threshold for Regional Retail Projects: The project reduces or has no effect on the countywide total VMT under cumulative conditions.

Note on “Project’s Effect on VMT” for residential and employment projects: Measuring the ‘project’s effect on VMT’ is necessary under cumulative conditions to fully explain the project’s impact. A project effect on VMT under cumulative conditions would be considered significant if the Total VMT increases under the 2050 plus project condition compared to the no project condition.

The following provides guidance for performing cumulative analysis:

Step 1: Determine if the Project is consistent with land uses in the SANDAG Regional Plan 2050 model. To do this, compare the growth for the Project’s TAZ in 2050 vs. 2016. If the growth (either population/housing units or employment) captures the Project’s population/housing units or employment, then the Project is consistent with the RTP/SCS and cumulative analysis is not necessary.

Step 2: Determine if the Project has a less than significant Air Quality and Greenhouse Gas impact. If it has the less than significant impact, this indicates that the project meets Air Quality and GHG thresholds and is presumed to be consistent with the SANDAG RTP/SCS, and cumulative analysis is not necessary.

Step 3a: If a Project generates 2,400 daily trips or less (or daily trips that is appropriate for model sensitivity) then compare the Project’s 2050 VMT/capita or VMT/employee metric from the “General

Plan/Baseline” 2050 SANDAG model to the thresholds above. If the project has a VMT that is better than the threshold, the Project has a less than significant impact. If over the threshold, the project has a significant impact and mitigation may be required.

Step 3b: If the Project generates more than 2,400 daily trips complete Step 3a and perform a “project effect on regional VMT” analysis. The analysis should be performed using the SANDAG 2050 Regional Plan model.

3.5. VMT Analysis for Transportation Projects

For transportation projects, any project that results in an increase in additional motor vehicle capacity (such as constructing a new roadway or adding additional vehicle travel lanes on an existing roadway) has the potential to increase vehicle travel, referred to as “induced vehicle travel.”

Appendix F contains a list of transportation projects that, absent substantial evidence to the contrary, do not require an induced travel/VMT analysis since they typically do not cause substantial or measurable increases in VMT.

For all other projects, a VMT analysis must be done. To calculate the change in area (boundary method) VMT, the project should be input into the travel demand model. The “with project” area VMT produced by the model run is compared to the “no project” area VMT. A net increase in area VMT indicates that the project has a significant impact.

3.6. VMT Reduction and Mitigation Measures

To mitigate VMT related impacts, a project applicant must reduce the VMT generated on their project site. This can be done by reducing the number of automobile trips generated by the project, by reducing the distances that people drive to the project site, or both. VMT reductions are generally achieved through changes in a project’s site design or the application of on-site measures and strategies designed to incentivize, or require, users to take alternate forms or transportation in-lieu of single occupancy vehicles. This is known as Transportation Demand Management (TDM).

Development projects that are identified to have VMT related impacts are required to develop a TDM Plan to mitigate their impacts to the extent feasible. A TDM Plan should identify all of the feasible TDM measures in which the project can incorporate into its design to fully mitigate its impacts or reduce the identified significant impacts to the extent feasible. TDM Plans typically include measures such as carpooling and vanpooling programs, promotion of alternative work schedules, teleworking programs, and increasing bicycle, pedestrian, and transit use. As such, these programs are designed to reduce VMT by incentivizing, or requiring, users to take alternative modes of travel in lieu of single occupancy vehicles. TDM programs are generally most effective in areas with robust multi-modal networks, transit access, and high land use densities that allow for shorter trip lengths. Therefore, most TDM strategies are not effective in rural areas.

Quantification of the VMT reductions included within a project’s TDM plan shall be based on the methods outlined in the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (GHG

Handbook), December 2021¹. As noted previously, not all TDM measures are effective in rural areas; therefore, **Appendix G** outlines the measures within the CAPCOA GHG Handbook that can be applied within the land use zones of the County, as well as the sources for the variables that can be assumed within the calculations. Finally, only the measures intended to be applied at site/project level (Measures T-1 through T-16) can be included in a project's TDM plan. In the future, the County may develop a VMT Mitigation Fee Program which would fund and implement Plan/Community level TDM measures (Measures T-17 through T-30). If the County does develop and implement a VMT Mitigation Fee Program, projects who construct Plan/Community level measures, such as bicycle and pedestrian facilities, would be eligible for a fee credit.

A project applicant may include TDM measures not included within the CAPCOA GHG Handbook, or use calculation outside of the Appendix G within their TDM Plan if the following criteria is met:

1. A qualitative analysis can be completed to determine the total VMT or percent of overall VMT would be reduced with the proposed TDM Measure(s).
2. Substantial evidence can be presented to confirm the accuracy and feasibility of the VMT reduction associated with the proposed TDM Measure(s).
3. The it can be demonstrated that the TDM measures is not double counting reductions already included within the SANDAG model.
4. All measures and their associated calculations must be approved by County PDS staff.

3.7. Phase 2

As part of the "Phase 2" effort for the continued implementation of SB 743 and VMT, the Board directed County staff to conduct a Programmatic Environmental Impact Report (EIR) for Transit Opportunity Areas (TOAs); as well as use TOAs as a Reason for Adopting a Statement of Overriding on a project-by-project basis.

The Board also directed staff to study transitioning away from the use of Level of Service (LOS) as a General Plan Policy.

The Board also directed staff to work with SANDAG, San Diego Metropolitan Transit System (MTS) and North County Transit District (NCTD) to Develop a Regional VMT Mitigation Program; or work with the City of San Diego and/or Other Local Jurisdictions to develop regional or joint VMT mitigation program.

These programmatic options for addressing significant VMT impacts could include a VMT Impact Fee Program, TDM Ordinance, VMT Exchange, and/or a VMT Bank. Staff will also examine combining a community land trust with a VMT mitigation bank to create a path for environmental justice (EJ) and VMT opportunities within those communities. These options would offer a regional approach for achieving VMT reductions and are briefly described as follows:

VMT Based Fee Program – Development is assessed a fee based on the severity of their VMT related impact. The fee will be based on new development's fair share cost to implement off-site

¹ https://www.caleemod.com/documents/handbook/full_handbook.pdf
January 2026

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VMT reducing infrastructure to offset or reduce new development's impact to less than significant. The revenue collected from the fee program can then be used to implement the multi-modal infrastructure improvements outlined in the RTP, or other CIP programs.

VMT Mitigation Banking – Developments can buy VMT reduction credits from the County or other jurisdictions within the region, that are the result of previously constructed VMT reducing infrastructure or planned infrastructure that will be constructed within the near future. This program would operate very similar to a biological mitigation banking program, or the Carbon Offset program. The fees collected from this program would then be used to construct additional VMT reducing infrastructure in new locations, or be used to close gaps within the existing multi-modal network, thus making the network more efficient.

VMT Exchange Program – Developments with VMT related impacts would work with the County, or other local jurisdictions, to fund and implement off-site VMT reducing infrastructure and/or programs to off-set their VMT related impacts. This program would allow new development within suburban and rural jurisdictions to invest in multi-modal/VMT reducing infrastructure in more urban jurisdictions where higher reductions are possible and more efficient.

Updates to the Transportation Study Guide will occur as the efforts of Phase 2 are finalized and adopted.

These concepts are further discussed in Appendix E – Technical Memorandums Programmatic VMT Mitigation Options.

Links to additional resources

- County SB 743 Website - <https://www.sandiegocounty.gov/content/sdc/pds/SB743.html>
- SANDAG - <https://www.sandag.org/index.asp?fuseaction=home.home>
- OPR Tech Advisory and FAQ - <https://opr.ca.gov/ceqa/sb-743/>
- CAPCOA - <http://www.capcoa.org/documents/>

Local Mobility Analysis

4.1. Local Mobility Analysis Overview

The authority for requiring non-CEQA transportation analysis and potentially requiring project improvement conditions to address identified deficiencies lies in the County's Site Plan review authority and General Plan policies to promote orderly development, promote public safety, and to ensure land development site planning and the needed infrastructure are adequate.

The LMA evaluates the effects of a proposed development project on traffic operations and safety for the roadway network in the proximate area of the project. The LMA will:

- Ensure that the local transportation system is adequate to serve the project and that improvements identified in the General Plan are constructed when needed consistent with the County's Public Road Standards.
- Address issues related to operations and safety for all transportation modes.
- Ensure consideration of the County's Active Transportation Plan for bicycle and pedestrian facilities.
- Identify the necessary transportation entitlement conditions for land development projects.
- Outline the County's screening criteria, study area and methodologies to assess the potential need for off-site transportation operation and safety improvements to the project study area roadway network.
- Establish measures of effectiveness to maintain transportation LOS consistent with the County's General Plan Mobility Element.
- Facilitate on-site project access and roadway frontage design infrastructure improvements to serve the project and the surrounding community.

4.2. LMA and General Plan Consistency

The LMA is intended to implement the County's General Plan by ensuring:

- A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.
- Development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where an unacceptable level of service has been accepted by the County. However, the Board directed staff to study transitioning away from the use of LOS as part of the General Plan Mobility Goals.
- New or expanded transportation facilities that are phased with and equitably funded by the development that necessitates their construction.
- Roads are designed to be safe for all users and compatible with their context and consistent with

County Public Road Standards.

- A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods.
- A public transit system that reduces automobile dependence and serves all segments of the population.
- Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.
- A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

4.3. Determining Study Requirements

4.3.1. Screening Criteria

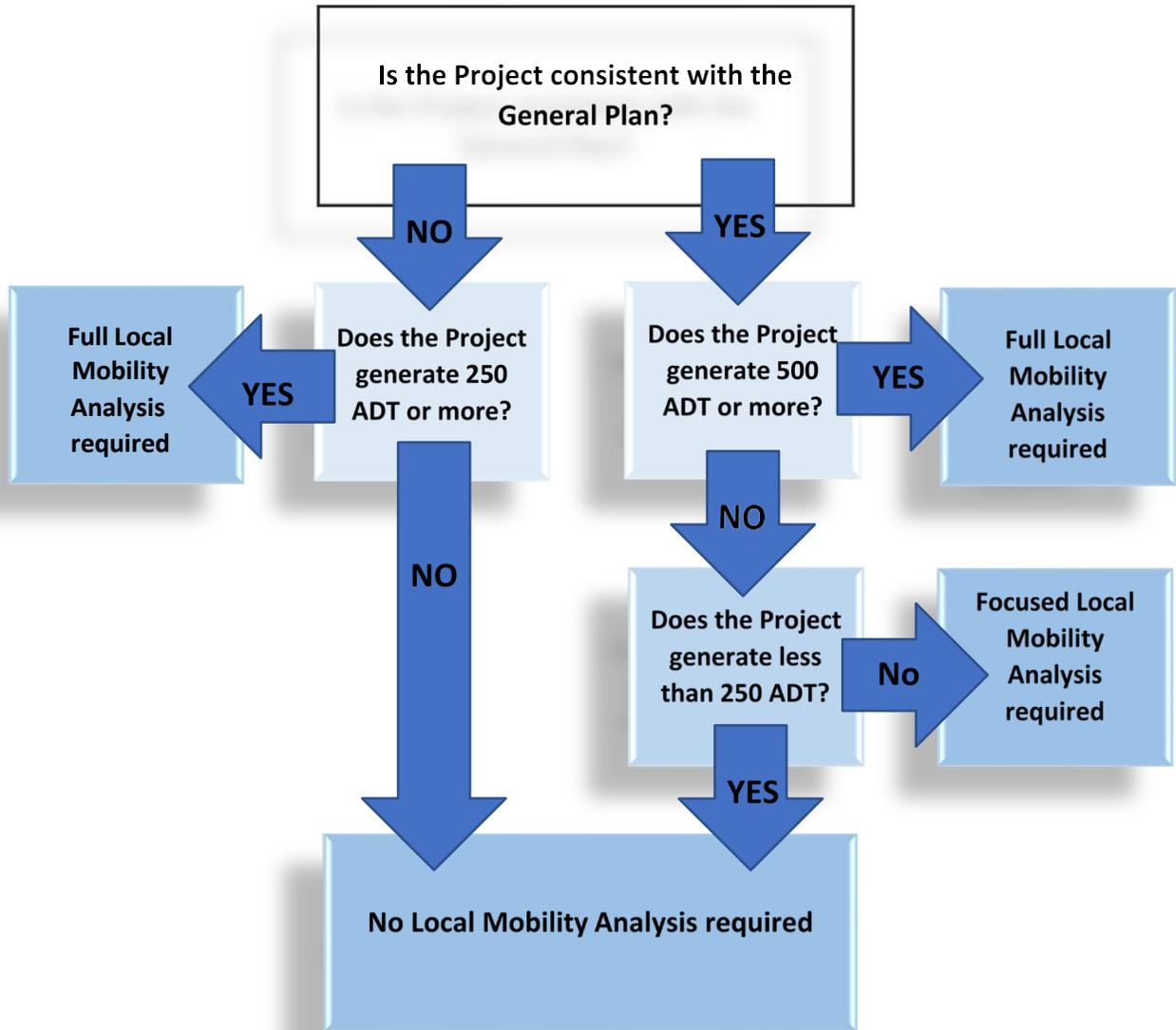
Discretionary projects may need to complete an LMA. The project’s consistency with the General Plan and estimated daily trips will determine the type of LMA that is required based on Table 4.

TABLE 5 - DETERMINING LOCAL MOBILITY ANALYSIS TYPE

	Focused LMA	Full LMA
Consistent with General Plan	250-499 Daily Trips	500 or greater Daily Trips
Inconsistent with General Plan	N/A	250 or greater Daily Trips

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken.

FIGURE 3 - DETERMINING LOCAL MOBILITY ANALYSIS TYPE



4.4. Analysis Requirements

4.4.1. Study Area

The extents of the LMA study will be determined for each mode based on the LMA type and travelmode, as follows:

Vehicle

Determine the required study (Focused LMA or Full LMA) based on the consistency with the General Plan, forecasted daily project trips, and the criteria listed in Table 5.

TABLE 6 - EXTENT OF STUDY FOR VEHICLE (INTERSECTION) ANALYSIS

	Focused LMA	Full LMA
Land Use Consistent with General Plan	<p>250-499 Daily Trips</p> <p>Site Access driveways and intersections that receive 50% or more of the total peak hour project generated trips (25 trip minimum) or have known operational concerns*</p>	<p>500 or greater Daily Trips</p> <p>Site Access driveways and intersections where at least 50 project peak hour trips are added or have known operational concerns (if the project does not contribute 50 peak hour trips total to any intersection, then the study intersections will be intersections that receive 50% or more of the total peak hour project generated trips)*</p>
Land Use Inconsistent with General Plan	<p>N/A</p>	<p>250 or greater Daily Trips</p> <p>Site Access driveways and intersections where at least 25 project peak hour trips are added or have known operational concerns*</p>

For purposes of determining the LMA type, trips are based on the number of vehicle trips after any internal capture and alternative modes/location-based adjustments are applied but before adjustments for pass-by are taken. Study intersections for Focused and Full studies are determined by number of project trips at the intersection, or if the project creates safety or operational concerns identified in the Scoping Agreement.

*The number of intersections to be included for LMA will be identified in the Scoping Agreement. For larger projects, a roadway segment assessment may be appropriate and requested by County staff.

Active Transportation

Assessment of pedestrian, bicycle, transit, and trail facilities will be identified in Scoping Agreement for private land development projects. For County-initiated projects, assessment of pedestrian bicycle; transit and trail facilities will be identified in coordination with County Department of Public Works and Department of Parks and Recreation. Identification of potential active transportation improvements through the LMA could also be utilized in VMT mitigation where applicable.

Pedestrian:

Documentation of existing and planned pedestrian facilities and basic deficiencies (missing sidewalk, curb ramps, and major obstructions) within ¼-mile walking distance measured from each pedestrian access point (for example, driveways, internal project sidewalk connections to the street, etc.).

Bicycle:

Documentation of existing and planned bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within one-mile bicycling distance measured from the center of the intersection formed by each project driveway.

Transit:

Identification of the closest transit routes and stops to the project within ¼ mile walking distance and documentation of amenities at existing transit stops (i.e. shelters, maps, benches, etc.).

Trails:

Documentation of all planned trails and pathways identified in the County's Community Trails Master Plan (CTMP) within ¼ mile of the project site.

4.4.2. Site Access and Circulation Evaluation Criteria

The LMA should address the following site-specific topics:

- Appropriate access management standards for median openings and spacing between major driveway connections.
- Potential sight distance problems.
- Potential pedestrian or bicycle conflicts.
- Relationship of internal circulation facilities to public streets.
- Sufficiency of driveway length at major entrances.
- On-site circulation as it impacts the public roadway system or access to public transportation and bicycle/pedestrian network.
- Potential for shared access among developments, including alternate access roads.

4.4.3. Data Collection and Study Periods

- Counts should be no more than two years old unless older counts are demonstrated to be still valid for Existing Conditions. Counts older than four years old must be updated.

- The LMA should provide tables and map figures of the traffic count data. Technical Appendices should include original traffic count data sheets.
- Traffic counts should typically be conducted during AM and PM peak periods on Tuesdays, Wednesdays, or Thursdays, unless approved by County staff. For typical commute hours, the peak hour will fall between 7:00-9:00 AM and 4:00-6:00 PM.
- Other peak hours, off-peak, or special event peak periods, may also be required depending on the project location and type of use. If the study necessitates a weekend analysis, Saturday from 11:00 AM to 1:00 PM will be the analyzed peak period.
- Traffic data should not be collected on weeks that include a holiday and non-school session time periods, unless approved by County staff.

4.4.4. Other Data Collection Considerations

Other considerations in data collection documentation and analysis should incorporate all applicable components that relate to the transportation network, which may include:

- Speed limits and average/85th percentile vehicle speed.
- Parking characteristics (on-street parking presence and type, bus stops).
- Signing (static, dynamic or variable) and pavement markings.
- School zone.
- Signal phasing and timing plans.
- Intersection control type.
- Right turn and left turn treatments.
- Railroad crossing location.
- Ramp metering.
- Pedestrian counts.
- Bicycle counts.
- Transit stops (type, frequency/schedule, dwell time, trip length, bus blockage).
- Roadway classification (functional class, rural/urban designation, access class, area type).
- Cross section elements (number, width and purpose of lanes, shoulder type and width, median type and width, pavement type and rating condition, cross slope, sidewalk, bicycle lane).
- Geometry (horizontal and vertical alignment, storage lengths, intersection/interchange configurations, auxiliary lanes).
- Pedestrian and bicycle accommodation.

- Transit (location, position, proportions with shelters and benches).
- Roadside (clear zone width, lateral clearance, driveway counts).

4.4.5. Study Scenarios

The following scenarios should be evaluated for the LMA:

- **Existing Conditions:** Existing traffic volumes. Document existing geometrics (i.e., roadway/intersection configurations, sight distance, turn lane storage, presence of closely spaced or offset driveways, etc.).

Document existing traffic volumes and peak-hour levels of service in the study area.

- **Opening Year Conditions:** The Opening Year (without project) traffic volumes should be derived by using an ambient growth factor applied to the existing traffic volumes. The proposed ambient growth factor should be submitted by the consultant and approved by County staff as part of the Scoping Agreement to determine the Opening Year conditions.
- **Opening Year Plus Project:** The project's generated traffic is added to the Opening Year Conditions to evaluate the *plus project* conditions.
- **Phased Analysis** (if necessary): For phased developments, include projections for the year that each phase of the development is planned to be complete. Forecast performance measures should be indicated both without and with the development in the year that each phase is planned to be complete. Either multi-phased development and/or construction phase especially if early phased development will overlap with construction activities.
- **Build-out/Horizon Year:** For General Plan Amendments (GPA), a General Plan Buildout/Horizon Year analysis (without and with the project) will be required. For GPAs, the LMA scope is expanded to identify potential new near-term and long-range traffic effects that were not previously identified in the Adopted General Plan analyses. The expanded GPA LMA includes a more comprehensive study area and a comparative Buildout assessment of the Adopted versus the Proposed GPA and the effects to the County's long-range Mobility Element roadway network.

4.4.6. Trip Generation

The applicant's consultant should identify the number of new daily and peak hour driveway vehicle-trips added by the project as described in this section.

Trip generation rates are commonly expressed in trips per unit of development - for example, trips per housing unit or trips per thousand square feet - and are derived by averaging trip generation data collected from existing land uses.

For San Diego County, the following trip generation sources should be used:

- The current edition of the Institute of Transportation Engineer's (ITE) Trip Generation Manual and Trip Generation Handbook. The Trip Generation Manual provides average trip generation rates and best-fit equations developed through regression analysis.

- The (not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. This guide provides average trip generation rates for a variety of land-use categories based on data collected solely within the San Diego region.
- For unique land uses, trip generation should be derived from local empirical data that include trip generation samples from at least three (3) similar facilities. The facilities selected as samples should be approved by County Staff through a Scoping Agreement prior to data collection.
- For existing facilities that are being expanded, trip generation should be determined by surveying the existing use to generate a project specific trip generation rate.
- The most detailed project information should be used to determine a project's trip generation estimate. For example, if the project's building square footage and the project acreage are both known, the building square footage is more detailed; therefore, should be used to estimate the trip generation.

4.4.7. Trip Reductions

Reasonable reductions to trip rates may also be considered, including:

Internal Capture

For mixed-use projects it is appropriate to estimate the interaction between the project uses. For example, for a project that has retail, residential, and office, with compatible supporting land uses within a ¼ mile walking distance, trip reductions may be used. Most trip generation data is for stand-alone, single land uses and does not account for the interaction between land uses for a mixed-use project.

Trip internalization for mixed-use developments (if applicable) should be calculated using state of the practice methodologies. The ITE Trip Generation Handbook provides a procedure for calculating internal trips for mixed-use projects. SANDAG's mixed-use trip generation or (MXD) methodology may also be considered. The applicant's consultant may also propose a method for determining adjustments to trip generation for mixed-use projects, with approval from County staff through the Scoping Agreement.

Trip generation adjustments to account for internal capture should be applied to the raw trip generation calculated for each land use.

Alternative Modes

Most trip generation data is based on suburban locations with primarily auto trips. Transit, bicycling, and walking is not generally captured in the trip generation data. For projects that will have alternative modes, transit use, bicycling, and walking must be specifically acknowledged to reduce the trip generation (after the internal capture step).

Accounting for alternative modes includes considerations for project proposed (or required) TDM measures. Consultant should propose the alternative modes reduction factor for the project to be reviewed and approved by County staff identified in the Scoping Agreement.

SANDAG trip reduction factors may also be considered for developments within ¼ mile walking distance to a local transit station.

Pass-By & Diverted Trips

Properly estimating the number of pass-by trips is important because even though pass-by trips do not add extra trips to the surrounding roadway system, such trips impact the traffic at the driveways and all the turning movements expected at these driveways. The percentage of pass-by and diverted link trips should be estimated based on data provided by ITE or actual surveys of similar land uses. The pass-by reduction should not exceed 10% of the adjacent street volume.

Typically, pass-by trips will not be added to the study intersections (except for accounting for them at project driveways). Typically, diverted link trips are added to all study intersections along with the net new project trips, unless there is specific justification to demonstrate where the trips are diverting from.

Credit for Existing Uses

For redevelopment projects, it may be appropriate to apply a “trip credit” to account for vehicle trips being generated by an existing use that will be redeveloped. The existing use should be operating at the time of data collection, and traffic counts should be performed to determine the appropriate trip credit. The “trip credit” should be applied after internal capture and alternative modes are accounted for.

Truck Traffic

For projects that anticipate the generation of significant truck traffic (typically a project that estimates that truck traffic will account for 25% or more of the total project trip generation), all truck trips should be converted to passenger car equivalents (PCE) for the capacity analysis. Typically, the PCE that should be applied is 2.5 passenger cars for each truck trip.

Other Jurisdictions

Caltrans or adjacent jurisdictions may use different trip reduction rates. Early consultation with reviewing agencies is strongly recommended and must be documented in the Scoping Agreement.

FIGURE 4 - PROJECT TRIP GENERATION FLOW CHART



4.4.8. Trip Distribution

The following describes the procedure for assigning project trips to the roadway network. Trip distribution can be determined from zip code data, census data, market research, travel demand models, existing travel patterns, and/or the locations of complementary land uses, and professional engineering judgment. Trip distribution assumptions should be consistent for developments of the same use in the same areas. Trip distribution for the County can be estimated using two methods:

- Manual estimation using procedures described above for existing traffic volumes, location of complementary land uses, and engineering judgement. The trip distribution should be clearly communicated on a map that shows the percent of project traffic on each roadway in the vicinity of the project site. Manual estimation is appropriate for projects performing a Site Access Study, Focused LMA, or project's that generate less than 1,000 daily trips.
- Use the current version of the SANDAG Regional Travel Demand Model to perform a select zone analysis. The SANDAG Regional Travel Demand Model should be used to determine the trip distribution for projects that generate 1,000 or greater daily trips.

A preliminary trip distribution pattern should be submitted with the Scoping Agreement for County staff review.

4.5. LMA Methodology

4.5.1. Signalized Intersections Methodology

Traffic operational impacts at signalized intersections should be analyzed using standard or state-of-the-practice procedures such as Highway Capacity Manual (HCM) analysis. At isolated intersections that are not heavily congested, deterministic methods that apply HCM equations for each intersection in isolation can be used. HCM 6th Edition is the latest version which reflects current state-of-the-practice methodology. There are several software packages that use deterministic methods such as Synchro, Vistro (previously Traffix), and Highway Capacity Software. The HCM methodology assigns a LOS grade to an intersection based on estimated delay.

For intersections that are closely spaced, have a unique geometry, or are part of a congested corridor, micro-simulation analysis should be performed. Micro-simulation can more accurately evaluate intersections with unique characteristics or in congested systems because the method accounts for how intersections within a system interact with one another. For example, if a vehicle queue extends from an intersection and blocks a different intersection, micro-simulation will account for that condition, whereas deterministic methods will not. Micro-simulation should also be considered when determining required turn lane storage if the analyst believes deterministic methods are not producing reasonable maximum or 95th percentile queue lengths. There are several micro-simulation software packages such as SimTraffic (which is a module of Synchro) and Vissim.

It is recommended that the methodology and software proposed for use is coordinated with County staff as part of the Scoping Agreement process. County staff may also request the consultant provide micro-simulation electronic files for review.

The following provides general guidelines for the parameters necessary to perform the analysis. For evaluating existing and project buildout conditions within five years of commencement of the LMA, the parameters should generally be based on field measurements taken during traffic data collection or field observation. For new study intersections or to analyze a buildout year that is beyond five years of commencement of the LMA, the guidelines in **Table 6** can be used to determine input parameters.

TABLE 7 - SIGNALIZED INTERSECTIONS PARAMETERS

Parameter	Guidance
Intersection Delay	Average intersection delay (and associated HCM level of service) should be reported for signalized intersections.
Peak Hour Factor (PHF)	Use the measured PHF by intersection approach that is obtained during traffic data collection. For new intersections or to analyze conditions beyond five years of commencing the LMA, refer to the HCM and maintain consistency across analysis periods, scenarios, and intersections.
Saturation Flow Rate	Use typical saturation flow rate presented in the HCM. The current typical saturation flow rate is 1,800 vehicles per hour per lane.

Signal Timing	Obtain signal timing plans from the appropriate agency and use the timing (by time of day if provided) for the analysis. For new traffic signals use a maximum cycle length of 120 seconds for intersections near freeway interchanges or at the intersection of two arterial roadways. For all other conditions use a maximum of 90 seconds. For all conditions, ensure that the minimum pedestrian crossing times are utilized.
Conflicting Pedestrians and Pedestrian Calls	Use pedestrian count data if available. If not available refer to the HCM for appropriate minimum values.
Heavy Truck Percentage	If available, use observed values from field observations or traffic counts. If unavailable, the minimum recommended value is 3%. Heavy truck percentages should be higher on truck routes.
Lane Utilization Factor	If applicable, adjust the lane utilization factor based on field observations. Otherwise, refer to the HCM.
Queue & Storage Analysis	HCM should be utilized to compare turn volumes with the length of available storage.

An improvement is required at a signalized intersection if any of the following are triggered:

- Consistent with County General Plan Policy, any intersection that is operating at an acceptable LOS or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F should identify improvements to improve operations to LOS D or better.
- Any signalized study intersection that is operating at LOS E or F without project traffic where the project increased delay by 5.0 or more seconds should identify improvements to offset the increase in delay.
- If the left turn volume exceeds 100 vehicles per hour, an exclusive left turn lane is recommended.
- If the left turn volume exceeds 150 vehicles per hour and posted speed 45 mph or greater, a protected left turn signal phase is recommended.
- If the left turn volume exceeds 300 vehicles per hour, a second left turn lane is recommended.
- If the right turn volume exceeds 150 vehicles per hour, a dedicated right turn lane is recommended.
- The project causes the 95th percentile queue at a turn lane to exceed the existing turn lane length/storage.

The following types of typical improvements for signalized intersections:

- Addition of left or right turn lanes.
- Lengthening a turn lane.
- Signal timing/phasing/coordination/equipment improvements or transportation system management (TSM).
- ADA signal accessible improvements.
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County Active Transportation Plan.

4.5.2. Unsignalized Intersections Methodology

Traffic operational impacts at unsignalized intersections (all-way stop, side-street stop, and roundabout intersections) should be analyzed using standard or state-of-the-practice procedures consistent with acceptable LOS as outlined in the County General Plan. The software packages and methods described for signalized intersections also apply to stop-controlled intersections.

All-way stop intersections and roundabouts should be reported for the entire intersection average value.

Minor side-street stop intersections should be reported for the worst-case movement.

An improvement is required at side street stop unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- If the worst-case movement is currently operating at LOS E or F:
 - The project adds 5 or more seconds of *overall intersection*.AND
 - The project adds ten (10) or more trips to the worst-case movement OR 50 or more trips to the overall intersection.
- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD—latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

An improvement is required at all-way stop and roundabout unsignalized intersection if:

- The project causes the average intersection delay to be LOS E or F during the peak hour.
- The project adds 5 or more seconds of delay to an intersection that is currently operating at LOS E or F during the peak hour.

- The intersection meets the peak hour traffic signal warrants after the addition of project traffic per the *California Manual on Uniform Traffic Control Devices* (CA MUTCD—latest edition). An investigation of the need for a traffic control signal may also include an analysis of factors related to the existing operations and safety at a study intersection and the potential to improve these conditions. A warrant analysis is not required for right turn in/right turn out only intersections or driveways that are physically restricted by raised center median.

The following types of typical improvements improve operations for unsignalized intersections:

- Install All-Way Stop Control.
- Install Two-Way Stop Control.
- Provide Left Turn Lane.
- Provide Right Turn Lane.
- Install Bypass Lane.
- Install Center Acceleration Lane.
- Install new traffic control device (Perform intersection control evaluation (ICE), see below).
- The County may also require upgrades to meet current design standards or better accommodate pedestrian and bicycle mobility consistent with the County ATP.

4.5.3. Intersection Control Evaluation (ICE)

The selection of the appropriate intersection control evaluation (ICE) should be guided by performance-based evaluations that objectively consider the range of project solutions and control strategies for a given project context. Traffic operations and safety performance are key inputs into the ICE framework. Consistent with the California MUTCD, the County of San Diego recognizes the roundabout as a standard form of intersection control. Roundabouts can provide increased efficiency of operations and enhanced safety. Should a project recommend the construction of a new signalized intersection or control measure, the County recommends the intersection be further analyzed using Caltrans ICE methodology. If the analysis screening indicates that a roundabout should be evaluated, the analysis should be conducted using one of the following methodologies: SIDRA or RODEL. These models are consistent with HCM 2010 and HCM Edition 6 models.

There are various reference and informational guides that discuss applications, designs, and performance characteristics of different intersection types and control strategies are available to support screening, analyzing and designing roundabouts.

<https://safety.fhwa.dot.gov/intersection/ice/fhwasa18076/fhwasa18076.pdf>

<https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/> <https://dot.ca.gov/programs/traffic-operations/intersection-evaluation-control>

It is recommended that early consultation occur with County staff when the Transportation Study determines the need for a new intersection control measure. A roundabout option should be screened

early in the draft Transportation Study. During this process, the applicant's consultant may request a meeting with County staff to clarify study requirements or comments received on the draft study related to the need to conduct an ICE study.

4.5.4. Roadway Segments Methodology

Intersections are typically the constraint when analyzing traffic operations. However, in some cases for larger projects, a roadway segment assessment may be appropriate and requested by County staff.

Roadway segment analysis should be performed using thresholds from the latest HCM methodology that reflects the current state-of-the-practice. The HCM methodology assigns a LOS grade to the roadway segment and is evaluated based on acceptable LOS as identified in the County General Plan and Public Road Standards based on facility classification type.

https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch3.1.8/2014-12-19_CountyofSanDiego2012_PublicRoadStandards.pdf

4.5.5. Site Access, Safety, and Other Analyses

The proper application of access management and basic site planning principles is essential to all transportation analysis. The design of site circulation, parking, and access should also easily accommodate bus and pedestrian movements. The following factors should be considered when evaluating existing and/or post-project traffic conditions to address identified traffic operations and safety concerns:

1. Sight Distance
2. Intersection phasing and queuing
3. Inadequate weaving distance with increasing traffic volumes
4. Inadequate deceleration length with increasing traffic volumes
5. Speed differentials from vehicles slowing or stopping
6. Inadequate decision sight distance
7. Access management
8. Driveway location and design
9. Bicycle, pedestrian and transit accessibility

TABLE 8 - SAFETY TREATMENTS BY FACILITY TYPE

Facility Type	Treatment
Freeways	Ensure intersection and freeway ramps capacity and storage don't spill onto local roadways
Roadways	Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or otherwise to improve safety
Intersections	Addition of through lane(s), right turn lane(s) and left turn lane(s)
	Left and/or right turn lane pocket length (queue length)
	Intersection control measures and coordination (stop control, signal, roundabout)
	Intersection geometrics for heavy vehicle traffic (e.g. curb returns)
Driveways	Sight distance
	Driveway length and gated entrances
	Corner clearance
	Number of driveways
Access Management	Raised median and two-way-left-turn lanes
	Sight distance improvements
	Access and signal spacing
	Gap analysis
Complete Streets - Bicycle, Pedestrian & Transit	Infrastructure
	Accessibility
	Bus turnouts
Parking	Parking plans and restrictions
Traffic Calming	Vertical deflections (speed humps, speed tables, and raised intersections), horizontal shifts, roadway narrowing, etc.

Construction

All projects should anticipate construction impacts with new development. To the extent possible, operational analysis should include information about project construction schedule such as duration, hours of operations, any required grading, potential haul routes, traffic control plans and street closure.

Active Transportation Assessment

The County of San Diego's Active Transportation Plan (ATP) is a multi-objective plan that balances environmental, economic, and community interests; implements the County's General Plan; and aligns with multiple County initiatives. The ATP identifies goals, objectives, and actions related to improving safety to reduce auto collisions with cyclists and pedestrians, increasing accessibility and connectivity with an active transportation network, and improving public health by encouraging walking and biking.

The pedestrian, bicycle, and trail facilities assessment is intended to determine a project's potential effect on Active Transportation facilities in the vicinity of the proposed project. The deficiencies could be *physical*, through removal or modification of existing facilities. The deficiencies could also be based on *demand* if the project is adding bicycle and pedestrian trips to inadequate facilities.

<https://www.sandiegocounty.gov/content/sdc/pds/advance/ActiveTransportationPlan.html>

Pedestrian: Documentation of existing and planned pedestrian facilities and basic deficiencies (missing sidewalk, curb ramps, and major obstructions) within ¼-mile walking distance measured from each pedestrian access point (for example, driveways, internal project sidewalk connections to the street, etc.).

The project should construct sidewalks to close sidewalk gaps adjacent to the project site.

The project should remove sidewalk obstructions that limit the pedestrian access route to less than four feet adjacent to the project site.

The project should construct curb ramps/meet accessibility standards for any intersections adjacent to the project site.

The project can consider adding traffic calming and pedestrian related signal timing changes (leading pedestrian interval signal timing) to accommodate an increase in pedestrian demand on roadways and intersections adjacent to the project site.

Bicycle: Documentation of bicycle facilities and basic deficiencies (bike lane gaps, obstructions) within ½ mile bicycling distance measured from the center of the intersection formed by each project driveway.

The project should construct (or preserve space for) any planned bicycle facility per the County's Active Transportation.

The project could consider upgrading adjacent bicycle facilities by adding upgraded treatments (such as green bike lane paint, buffers, etc. where appropriate) to accommodate an increase in bicycle demand.

The project should construct any planned bicycle facilities adjacent to the project frontage to be consistent with the County's Mobility Element and Active Transportation Plan.

Trails: The County Trails Program will be utilized to develop a system of interconnected regional and community trails and pathways. These trails and pathways are intended to address an established public need for recreation and transportation but will also provide health and quality of life benefits associated with hiking, mountain biking, and horseback riding throughout the County's biologically diverse environments. The County Trails Program involves both trail development and management on public, semi-public, and private lands.

<https://www.sandiegocounty.gov/content/sdc/pds/community-trails-master-plan.html>

Documentation of all planned trails and pathways identified in the County's CTMP within ¼ mile of the project site.

The project should construct any planned pathways along the project's frontage to be consistent with the County's Mobility Element and CTMP.

Documentation of all planned or existing trails that bisect any portion of the project's parcel(s).

For project parcels that include a planned trail, early coordination with County Trails Staff is strongly encouraged to determine trail alignment and any potential easements that may be requested or required.

County Design Exception Request (DER) Process

The LMAs should identify and provide a brief summary of proposed and approved DERs. The LMAs should contain a reference to the detailed design exception documentation (separate documents that are included in LMA Technical Appendices).

Fire/Emergency Services

LMAs for large residential projects (over 50 units/500 ADT) and non-conforming GPA projects should provide a high-level discussion regarding secondary/emergency access and emergency evacuation planning with the local Fire District and emergency service agencies. The LMA should include a reference to supporting project documentation that addresses secondary/emergency access and emergency evacuation planning in a more comprehensive manner.

The following additional resources can be found on the PDS Land Development webpage:

- Procedures for Evaluating Sight Distance
- Roads Centerline Ordinance User Guide
- Roads Improvement Plans User Guide

<https://www.sandiegocounty.gov/content/sdc/pds/LandDevelopment.html>

Appendix A: Scoping Agreement for Transportation Studies



Scoping Agreement for Transportation Studies

General Project Information and Description

Project Information

Project Name:

Project PDS Number:

Project Location:

Project Description

Land Uses and Intensities:

Gross and Developable Acreage:

Number of Vehicle Parking Spaces:

Bicycle Storage Capacity:

Motorcycle Spaces:

Consultant

Name of Firm: _____ **Approved Consultant List Y/N:** _____

Project Manager: _____

Address: _____

Telephone: _____

Trip Generation

Source:	Pass-by Trips:
Total Daily Trips:	Diverted Trips:
Internal Capture Rate:	Trip Credit:
Alternative Modes:	Net Daily Trips:

General Plan Consistency

Is this project consistent with the General Plan? Yes No

Site Plan

Attach 11x17 copies of the project location/vicinity map and site plan containing the following:

- Driveway locations and access type
- Pedestrian access, bicycle access, and on-site pedestrian circulation
- Location and distance to closest existing transit stop (measure as walking distance to project entrance or middle of parcel)
- Location of any planned trails identified in the Community Trails Master Plan (CTMP) within ¼ mile of the project location

CEQA Transportation Analysis Screening

Project Type Screening

	Screened Out	Not Screened Out
	Yes	No
1) Select the Land Uses that apply to your project		
2) Answer the questions for each Land Use that applies to your project <i>(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)</i>		
<input type="checkbox"/> 1. Mixed-Use Project:		
a. Is the project location screened out based on the SANDAG screening map for VMT/service population?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2. Locally Serving Retail/Public Facility/Recreational	<input type="checkbox"/>	<input type="checkbox"/>
a. Is the project locally serving: Retail OR Public Facility OR Recreational?		
<input type="checkbox"/> 3. Redevelopment Project:	<input type="checkbox"/>	<input type="checkbox"/>
a. Does the project result in a net decrease in total Project VMT than the existing use?		
b. If the project is to redevelop an affordable housing site, are all proposed units affordable housing units? Mark "No" for projects that replace affordable housing with market rate units	<input type="checkbox"/>	<input type="checkbox"/>

Project Location Screening (if not screened based on project type) – Part 1

Is this project located within a grey area (area with little to no existing land use) on the applicable County screening maps for the project land use type?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If "yes", the project cannot be screened based on location. If "No", proceed to Part 2.		

Project Location Screening (if not screened based on project type) – Part 2

	Screened Out	Not Screened Out
	Yes	No
1) Select the Land Uses that apply to your project		
2) Answer the questions for each Land Use that applies to your project <i>(if "Yes" in any land use category below then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)</i>		
<input type="checkbox"/> 1. Residential		
a. Is the project location screened out using the County screening maps for VMT/resident?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 2. Employment		
a. Is the project location screened out using the County screening maps for VMT/employee or VMT/service population?	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 3. Retail/Public Facility/Recreational		
a. Is the project location screened out using the County screening maps for location screened out using the County screening maps for Infill locations?	<input type="checkbox"/>	<input type="checkbox"/>

Local Mobility Analysis

Type of Local Mobility Analysis (LMA)

<input type="checkbox"/> Site Access Study	249 daily trips or less
<input type="checkbox"/> Focused LMA	250 to 499 daily trips and consistent with the General Plan
<input type="checkbox"/> Full LMA	500 or greater daily trips and consistent with the General Plan, or 250 or greater daily trips and inconsistent with the General Plan

Trip Distribution

<input type="checkbox"/> Select Zone (Model Series _____)	Projects that generate greater than 1,000 daily trips
<input type="checkbox"/> Manual Estimation	Site Access Studies, Focused LMAs, or project's that generate less than 1,000 daily trips

Provide exhibit detailing trip distribution and trip assignment for review.

Study Intersections (and Roadway Segments) (NOTE: Subject to change based of staff review)

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Attach a separate page if the number of study locations exceeds 10.

Other Jurisdictions

Is this project located within one mile of another Local Jurisdiction? **Yes** **No**

If so, name of Jurisdiction:

Specific Issues to be addressed within the Study

(in addition to requirements described in the Guidelines – to be filled out by County Staff)

1.
2.
3.
4.
5.

Recommended by:

Consultant's Representative

Date

Scoping Agreement Submitted on

Date

Scoping Agreement Re-submitted on

Date

Approved Scoping Agreement:

County of San Diego
Transportation Specialist

Date

Appendix B: Transportation Study Format

Transportation Study Format Outline

The outline below provides organizational guidance for the various sections of a typical transportation study. When a project is screened from CEQA VMT analysis or local mobility analysis, the section is not required in the transportation study.

COVER PAGE

TABLE OF CONTENTS (Including a list of tables, maps, and figures)

GLOSSARY OF TERMS AND ACRONYMS

EXECUTIVE SUMMARY

- a) Table summarizing CEQA impacts and mitigation measures.
- b) Table summarizing LMA findings and proposed improvements.

INTRODUCTION

- 1.0 Project and Study Description.
 - 1.1 Purpose of the Transportation Study.
 - 1.2 Project location and vicinity map (Exhibit).
 - 1.3 Project size and description.
 - 1.4 Existing and proposed land-use and zoning.
 - 1.5 Site plan and proposed project (Exhibit).
 - 1.6 Proposed project opening year and analysis scenarios.

CEQA VMT ANALYSIS

- 2.0 Project VMT per capita, per employee, and/or per service population for all analysis scenarios.
- 3.0 Project effect on VMT for all analysis scenarios.
- 4.0 Identification of VMT impacts.
- 5.0 Proposed VMT mitigation measures.

LOCAL MOBILITY ANALYSIS

- 6.0 Methodology and Thresholds.
- 7.0 Existing Conditions.
 - 7.1 Existing roadway network.
 - 7.2 Existing traffic control and intersection geometrics (Exhibit).
 - 7.3 Existing traffic volumes – AM and PM peak hour and ADT (Exhibit).
 - 7.4 Existing level of service (LOS) at intersections (Table).
 - 7.5 Existing bicycle facilities (Exhibit).
 - 7.6 Existing pedestrian and trail facilities (Exhibit).
 - 7.7 Existing transit facilities (Exhibit).
- 8.0 Project Traffic.
 - 8.1 Trip generation (Table).
 - 8.2 Trip distribution and assignment (Exhibit).
 - 8.3 Project AM and PM peak hour turning movement volumes (Exhibit).
- 9.0 Opening Year Analysis.

- 9.1 Opening Year No Project Analysis.
 - 9.1.1 AM and PM peak hour turning movement volumes (Exhibit).
 - 9.1.2 Intersection level of service (Table).
- 9.2 Opening Year Plus Project Analysis.
 - 9.2.1 AM and PM peak hour turning movement volumes (Exhibit).
 - 9.2.2 Intersection level of service (Table).
 - 9.2.3 Identification of intersection deficiencies and improvements.
- 10.0 Phased Year Analysis (if necessary).
 - 10.1 Project phase description (including construction overlap) and projections.
 - 10.2 Phased Year No Project Analysis.
 - 10.2.1 AM and PM peak hour turning movement volumes (Exhibit).
 - 10.2.2 Intersection level of service (Table).
 - 10.3 Phased Year With Project Analysis.
 - 10.3.1 AM and PM peak hour turning movement volumes (Exhibit).
 - 10.3.2 Intersection level of service (Table).
 - 10.3.3 Identification of intersection deficiencies and improvements.
- 11.0 Build-out/Horizon Year Analysis (for GPAs only).
 - 11.1 Build-out/Horizon Year No Project Analysis.
 - 11.1.1 AM and PM peak hour turning movements volumes (Exhibit).
 - 11.1.2 Intersection level of service (Table).
 - 11.2 Build-out/Horizon Year Plus Project Analysis.
 - 11.2.1 AM and PM peak hour turning movement volumes (Exhibit).
 - 11.2.2 Intersection level of service (Table).
 - 11.2.3 Identification of intersection deficiencies and improvements.
- 12.0 Traffic Signal Warrant Analysis.
- 13.0 Site Access Analysis.
- 14.0 Safety and Operation Improvement Analysis.
- 15.0 Active Transportation Analysis.
 - 15.1 Pedestrian Analysis.
 - 15.1.1 Existing and planned facilities (Exhibit).
 - 15.1.2 Deficiencies.
 - 15.1.3 Proposed improvements.
 - 15.2 Bicycle Analysis.
 - 15.2.1 Existing and planned facilities (Exhibit).
 - 15.2.2 Deficiencies
 - 15.2.3 Proposed improvements.
 - 15.3 Trails.
 - 15.3.1 Existing and planned facilities (Exhibit).
 - 15.3.2 Proposed improvements.
- 16.0 Improvements and Recommendations.
 - 16.1 Proposed improvements at intersections.
 - 16.2 Proposed improvements at roadway segments.

- 16.3 Recommended improvements categorized by whether they are included in a fee plan or not (identify if these improvements are included in an adopted fee program).

APPENDIX

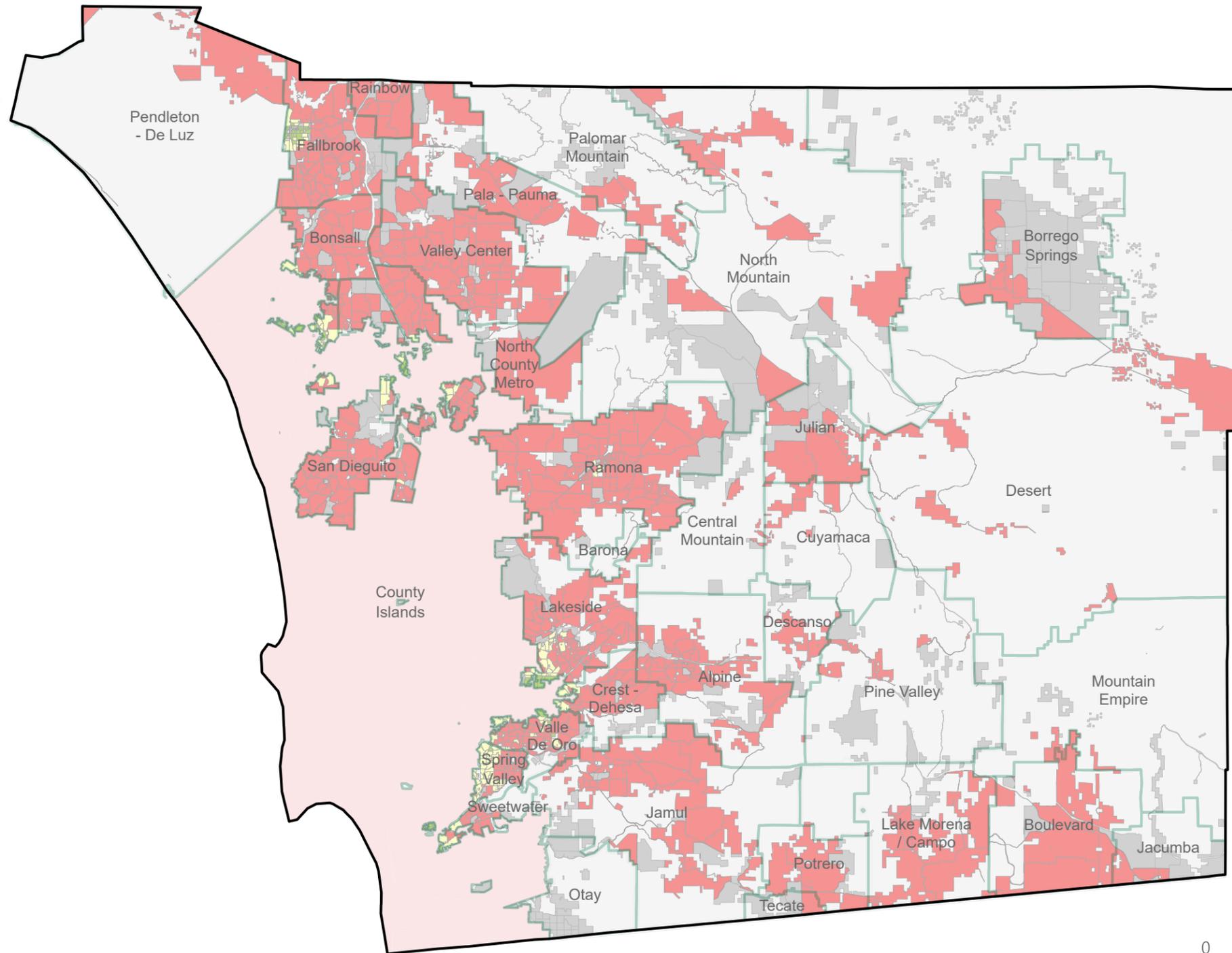
- A. Approved scoping agreement.
- B. Traffic counts.
- C. Intersection analysis worksheets.
- D. VMT and TDM calculations.
- E. VMT and TDM mitigation calculations.
- F. Signal warrant worksheets.

Appendix C: VMT Efficient Area Screening Maps

NOTE: The maps included within this appendix were derived using the most recent version of the SANDAG Activity Based Model (ABM 2+). ABM2+ is a peer reviewed model, designed for application in the San Diego Region's 2021 Regional Plan. ABM 2+ considers region's existing and future land use patterns, transportation network, and demographics. ABM2+ has also been develop to account for emerging technologies, including autonomous vehicles, shared mobility, ride hailing, transformative modes, and micro-mobility. It should be noted that SANDAG releases a new model series every four years, in association with the development and implementation of the RTP/SCS. As such, the VMT maps included within this Appendix are subject to change with the release of the next SANDAG Forecast Model Series (Series 15/ABM 3), which will be developed with the 2025 RTP/SCS.

The trip length adjustments, outlined under Section 3.2, were incorporated into the screening maps. Therefore, the VMT numbers provided within these maps will not match those provided on SANDAG's San Diego Region SB-743 VMT Maps. Additionally, due to the variability of results with small sample sizes, only TAZs with a minimum of 100 residents or 100 employees are reported.

Appendix C



Legend

- At least 15% below the SANDAG Regional Average
- 0% to 15% below the SANDAG Regional Average
- Above the SANDAG Regional Average
- Not Enough Data
- San Diego County Incorporated Cities
- Community Plan Area
- SANDAG Region



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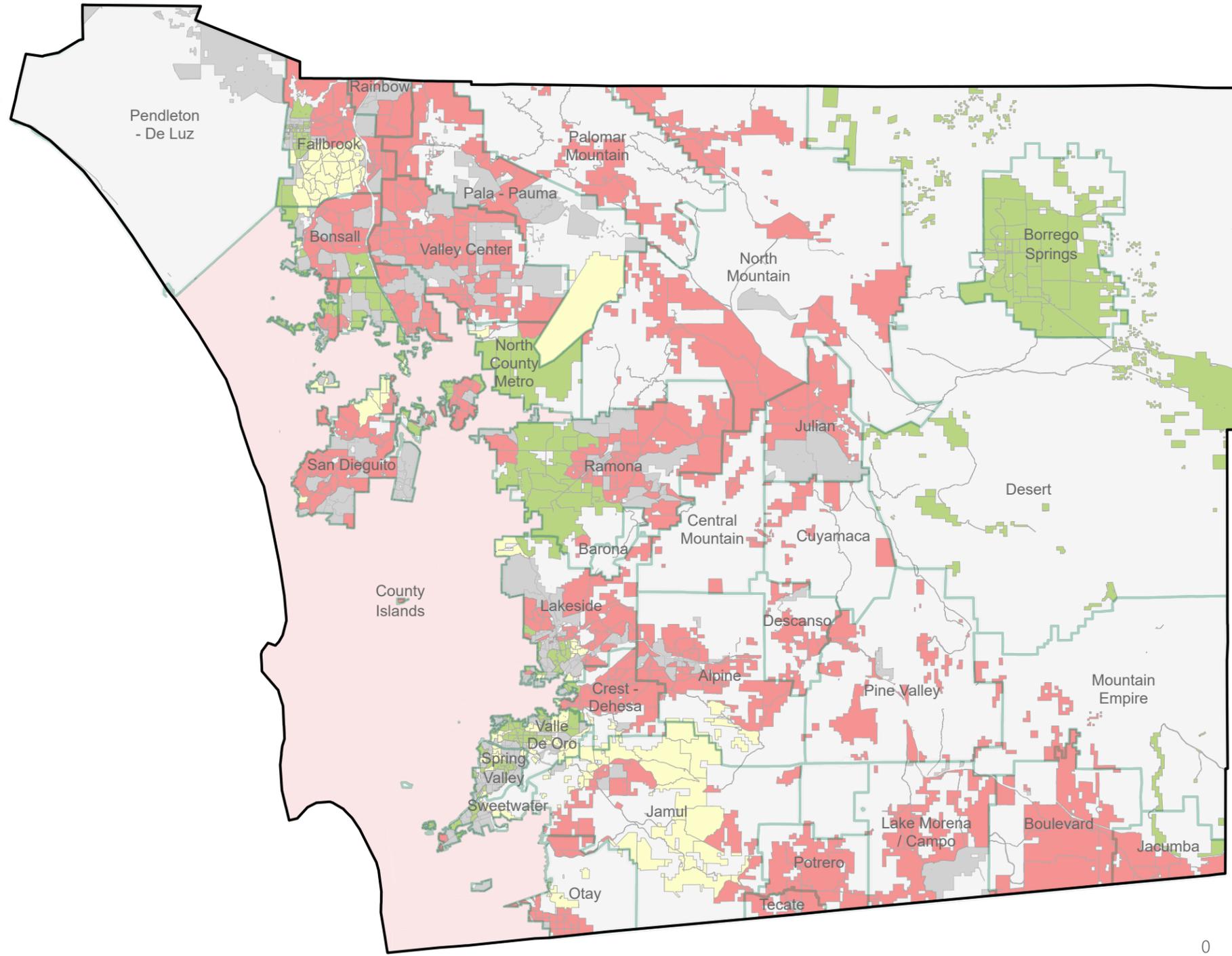
SANDAG Regional Average = 19.90 Vehicle Miles Traveled/Resident

San Diego County VMT Per Resident by TAZ Relative to SANDAG Regional Average*

*Based on the SANDAG ABM 2+ Regional Plan Base Year Model

May 9, 2022

Appendix C



Legend

- At least 15% below the SANDAG Regional Average
- Above the SANDAG Regional Average
- San Diego County Incorporated Cities
- Community Plan Area
- 0% to 15% below the SANDAG Regional Average
- Not Enough Data
- SANDAG Region



N:\Projects\2021_P\Projects\0407_SD County SB 743 Continuation\GIS\ArcPro\ABM2Plus\ABM2Plus.aprx

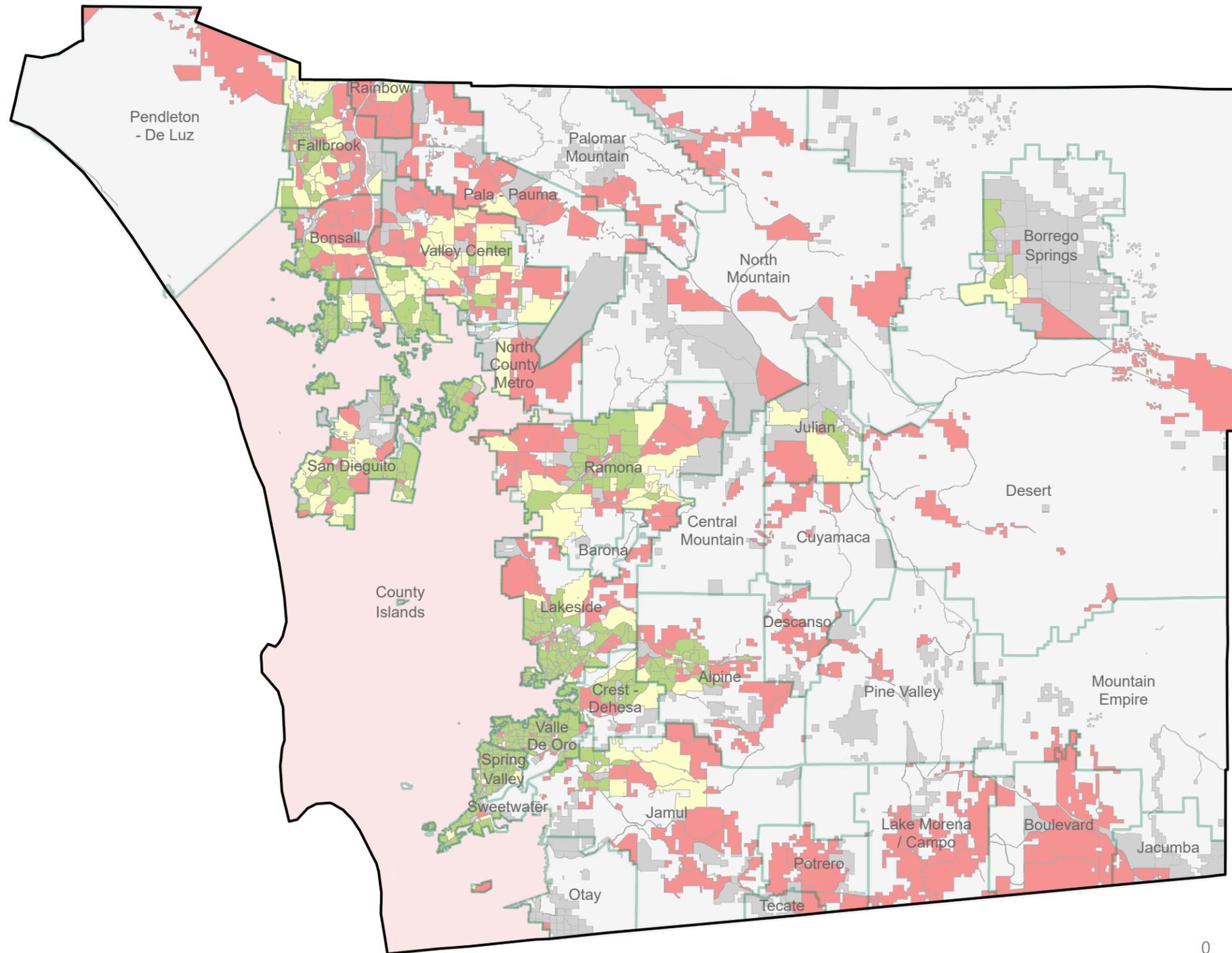


SANDAG Regional Average = 20.60 Vehicle Miles Traveled/Employee

San Diego County VMT Per Employee by TAZ Relative to SANDAG Regional Average*

*Based on the SANDAG ABM 2+ Regional Plan Base Year Model

Appendix C



Legend

- At least 15% below the SANDAG Regional Average
- 0% to 15% below the SANDAG Regional Average
- Above the SANDAG Regional Average
- Not Enough Data
- San Diego County Incorporated Cities
- Community Plan Area
- SANDAG Region



SANDAG Regional Average = 40.03 Vehicle Miles Traveled/Service Population

San Diego County VMT Per Service Population by TAZ Relative to SANDAG Regional Average*

*Based on the SANDAG ABM 2+ Regional Plan Base Year Model



Appendix D: Project Types Grouped by Land Use Category

Project Types Grouped by Land Use Category

The following table provides a list of unique project types and the land use type they should be considered under for SB 743 screening and analysis.

LAND USE CATEGORIES

Land Use Category for SB 743 Analysis for all Project Types

1. Residential Projects

The uses below generally fall within the County General Plan Land Use Designations of Village Residential, Semi-Rural Residential or Rural Lands Residential.

- | | |
|---|---|
| <ul style="list-style-type: none"> • Congregate Care Facility • Estate Housing • Mobile Home | <ul style="list-style-type: none"> • Multiple Dwelling Unit (all sizes) • Retirement/Senior Citizen Housing • Single Family Detached |
|---|---|

2. Employment Projects

The uses below generally fall within the County General Plan Land Use Designations of General Commercial, Office Professional, Limited-Impact Industrial, Medium-Impact Industrial or High-Impact Industrial.

- | | |
|---|--|
| <ul style="list-style-type: none"> • Agriculture • Hospital: Convalescent/Nursing • Hospital: General • Industrial/Business Park • Scientific Research and Development • Hotel (w/ convention facilities/restaurants) • Motel • Resort Hotel • Military Base | <ul style="list-style-type: none"> • Commercial Office • Corporate Headquarters/Single Tenant Office • Large Medical Centers • Government Offices (Primarily Office with Employees) • Industrial: Manufacturing/Assembly • Industrial: Rental Storage • Industrial: Truck Terminal • Industrial: Warehousing |
|---|--|

3. Retail and Service

The uses below generally fall within the County General Plan Land Use Designations of General Commercial, Neighborhood Commercial, Rural Commercial, or Village Core Mixed Use.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Shopping Center • Automobile Services • Convenience Market Chain • Discount Store/Discount Club • Drugstore • Furniture Store • Lumber/Home Improvement Store • Nursery • Restaurant • Specialty Retail Center/Strip Commercial | <ul style="list-style-type: none"> • Supermarket • Financial Institution (Bank or Credit Union) • Bowling Center • Movie Theater • Racquetball/Tennis/Health Club • Sport Facility (Indoor or Outdoor) • Winery • Special Event Facility • Medical offices |
|--|---|

4. Regional Public Facilities

The uses below generally fall within the County General Plan Land Use Designation of Public and Semi-Public Facilities.

<ul style="list-style-type: none">• Airport• University• Community College	<ul style="list-style-type: none">• House of Worship: General• House of Worship: Without School or Day Care• Bus Depot
--	--

5. Locally Serving Public Facilities

The uses below generally fall within the County General Plan Land Use Designation of Public and Semi-Public Facilities.

<ul style="list-style-type: none">• Schools (unless determined to draw students from outside the local area)• Day Care Center/Child Care Center• Library• Department of Motor Vehicles• Government Offices (Primarily Serving Customers)	<ul style="list-style-type: none">• Post Office• Park & Ride Lot• Transit Station• Neighborhood Park (developed or undeveloped)
--	--

6. Regional Recreational

The uses below generally fall within the County General Plan Land Use Designations of Rural Lands Residential, Rural Commercial, or Open Space- Recreation.

<ul style="list-style-type: none">• Marina• Zoo	<ul style="list-style-type: none">• Golf Course• Aquarium
--	--

Appendix E: Transportation Projects That Do Not Require VMT Analysis

Transportation Projects That Do Not Require VMT Analysis

The following complete list is provided in the OPR Technical Advisory (December 2018, Pages 20-21) for transportation projects that “would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis:”

- 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 that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails
- 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., HOV, HOT, 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 non-motorized 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

Appendix F: TDM Measures and VMT Reduction Calculation Methodology

Final County of San Diego Transportation Study Guidelines

Table G-1 summarizes the Project/Site level TDM measures that are identified within CAPCOA’s GHG Handbook. As noted previously in Section 3.5, Plan/Community level TDM measures need to be implemented as a system and therefore are not applicable to individual development projects. The table outlines the areas in which individual measures can be applied (Urban, Suburban, and Rural) as well as if the measure can be applied to residential uses (VMT/Capita) employment uses (VMT/Employee), or both. The table also outlines the range of VMT reduction that may be associated with each measure. Finally, the measures highlighted in red have been deemed to not be applicable within the unincorporated portions of San Diego, with the reasoning cited under the notes column.

Table G-1 Summary of Project / Site TDM Measures

#	Name	Applicable Areas			Use Types		Range ¹	Notes
		Urban	Suburban	Rural	Residential	Employment		
T-1	Increase Residential Density	X	X		X		N/A	To avoid double counting, VMT reductions associated with this measure must be calculated via a SANDAG model run where the project land uses have been included within their respective TAZ.
T-2	Increase Job Density	X	X			X	N/A	To avoid double counting, VMT reductions associated with this measure must be calculated via a SANDAG model run where the project land uses have been included within their respective TAZ.
T-3	Provide Transit-Oriented Development	X	X	X	X	X	N/A	Infill areas within Transit Opportunity Areas (TOA) are screened out from conducting a VMT impact analysis. See Appendix D.
T-4	Integrate Affordable and Below Market Rate Housing	X	X		X		0.0%-22.4%	Reductions are based on local counts, see Appendix E.
T-5	Implement Commute Trip Reduction Program (Voluntary)	X	X			X	0.0%-4.0%	Must register and maintain reporting with SANDAG’s iCommute Program.
T-6	Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)	X	X			X	0.0%-26.0%	Must register and maintain reporting with SANDAG’s iCommute Program.
T-7	Implement Commute Trip Reduction Marketing	X	X			X	0.0%-4.0%	Cannot be implemented in addition to T-5 or T-6
T-8	Provide Ridesharing Program	X	X			X	0.0%-8.0%	Must register and maintain reporting with SANDAG’s iCommute Program.
T-9	Implement Subsidized or Discounted Transit Program	X	X		X	X	N/A	Infill areas within TOAs are screened out from conducting a VMT impact analysis. See Appendix D. Areas outside of TOAs would not have sufficient transit access to qualify for this measure.
T-10	Provide End-of-Trip Bicycle Facilities	X	X		X	X	0.1%-0.6%	Project site must be accessed by a Class II bicycle facility or protected bicycle facility.

#	Name	Applicable Areas			Use Types		Range ¹	Notes
		Urban	Suburban	Rural	Residential	Employment		
T-11	Provide Employer-Sponsored Vanpool	X	X	X		X	1.45%	Must register and maintain reporting with SANDAG's iCommute Program.
T-12	Price Workplace Parking	X	X			X	N/A	Only feasible when transit services are present. Infill areas within Transit Opportunity Areas are screened out from conducting a VMT impact analysis. See Appendix D.
T-13	Implement Employee Parking Cash-Out	X	X			X	N/A	Only feasible when on-street parking in the surrounding neighborhood is either permitted to metered. The County of San Diego does not meter or permit on-street parking. Therefore, this measure is not feasible.
T-14	Provide Electric Vehicle Charging Infrastructure	X	X	X	X	X	N/A	Only applicable to GHG reduction, no effect on VMT reduction.
T-15	Limit Residential Parking Supply	X	X		X		N/A	Projects must be consistent with the County's parking requirements.
T-16	Unbundle Residential Parking Costs from Property Cost	X	X		X		N/A	Only feasible when transit services are present. Infill areas within Transit Opportunity Areas are screened out from conducting a VMT impact analysis. See Appendix D

Note:

¹ Ranges have been calibrated to San Diego County; therefore, they do not match those provided in the CAPCOA GHG Handbook.

VMT Reduction Calculation Methodology

T-4: Integrate Affordable and Below Market Rate Housing

This measure is allowable within all areas of the unincorporated county.

$$VMT\ Adjustment = \frac{(7.32 \times Total\ Units) - (1.64 \times Affordable\ Units)}{7.32 \times Total\ Units} - 1$$

Total Units = Total residential units to be constructed by the project.

Affordable Units = Total affordable units to be constructed by the project, as defined by section 50052.5 of the California Health and Safety Code.

Note: This calculation is based on an affordable housing trip generation counts conducted within the County of San Diego (See Appendix E). Therefore, these calculations are different than those outlined in the CAPCOA GHG Handbook.

Background: See Appendix E - Affordable Housing and SB 743 VMT – Screening Considerations, Fehr & Peers, November 2021

T-5: Implement Commute Trip Reduction Program (Voluntary)

This measure is only allowable in areas with Village or Semi-Rural zoning and can only be applied to non-residential uses.

Program must include the following elements to apply the VMT reductions:

- Employer-provided services, infrastructure, and incentives for alternative modes such as ridesharing (Measure T-8), bicycling (Measure T-10), vanpool (Measure T-11), and guaranteed ride home.
- Information, coordination, and marketing for said services, infrastructure, and incentives (Measure T-7).
- Project must register for, and provide annual monitoring reports to, SANDAG's iCommute program.

$$VMT\ Adjustment = \% Eligible \times -4\%$$

% Eligible = Total number of employees eligible to participate in the program.

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-5.pdf

T-6: Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)

This measure is only allowable in areas with Village or Semi-Rural zoning and can only be applied to non-residential uses.

This program must include all other elements (i.e., Measures T-7 through T-11) described for the voluntary program (Measure T-5) plus include mandatory trip reduction requirements (including penalties for non-compliance) and regular monitoring and reporting to ensure the calculated VMT reduction matches the observed VMT reduction. The project also must register for, and provide annual reports to, SANDAG's iCommute program.

$$VMT\ Adjustment = \% Eligible \times -26\%$$

% Eligible = Total number of employees eligible to participate in the program.

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-6.pdf

T-7: Implement Commute Trip Reduction Marketing

This measure is only allowable in areas with Village or Semi-Rural zoning and can only be applied to non-residential uses. If this measure is selected, the user may not also take credit for either Measure T-5 or T-6. However, this measure may be implemented alongside Measures T-8 through T-11.

The following features (or similar alternatives) of the marketing strategy are required.

- Onsite or online commuter information services.
- Employee transportation coordinators.
- Guaranteed ride home service.

To use the measure the project must register for, and provide annual reports to, SANDAG's iCommute program.

$$VMT\ Adjustment = \% Eligible \times -4\%$$

% Eligible = Total number of employees eligible to participate in the program.

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-7.pdf

T-8: Provide Ridesharing Program

This measure is only allowable in areas with Village or Semi-Rural zoning and can only be applied to non-residential uses. To use the measure the project must register for, and provide annual reports to, SANDAG's iCommute program.

$$VMT\ Adjustment = \% Eligible \times -4\%$$

% Eligible = Total number of employees eligible to participate in the program.

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-8.pdf

T-10: Provide End-of-Trip Bicycle Facilities

This measure is only allowable in areas with Village or Semi-Rural zoning and can only be applied to non-residential uses. This measure will install and maintain end-of-trip bicycle facilities for employee use, including bike parking, bike lockers, showers, and personal lockers. The project site must be accessed by a Class II Bicycle Lanes or greater.

If the project provides bike parking, showers, and lockers:

$$VMT\ Adjustment = -0.6\%$$

If the project provides bike parking, showers, and lockers:

$$VMT\ Adjustment = -0.1\%$$

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-10.pdf

T-11: Provide Employer-Sponsored Vanpool

This measure is allowable within all areas of the County, but can only be applied to non-residential units. To use the measure the project must register for, and provide annual reports to, SANDAG's iCommute program.

$$VMT\ Adjustment = -1.45\%$$

Background: https://www.caleemod.com/documents/handbook/ch_3_transportation/measure_t-11.pdf

Appendix G: Justification/Rationale for Screening Criteria and Thresholds

This appendix provides context and justification/rationale for the screening criteria and thresholds for performing transportation VMT CEQA impact analysis.

Screening Criteria

Development projects are presumed to have less than significant impacts to the transportation system, and therefore would not be required to conduct a VMT analysis, if any of the following criteria are established.

1. Projects Located in a VMT Efficient Area (Location Based Screening Maps)

A VMT efficient area is any area with an average VMT per resident, VMT per employee, or VMT per service population 15 percent below the baseline average for the Region, which includes the entire San Diego County.

Land use projects may qualify for the use of VMT efficient area screening if the project can be reasonably expected to generate VMT per resident, per employee, or per service population, respectively, that is similar to the existing land uses in the VMT efficient area. Location-based screening maps are used to determine if a project is in a VMT efficient area.

Justification – This presumption is based on the Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) (OPR Technical Advisory), which provides 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. Maps created with data from a travel survey or travel demand model can illustrate areas that are currently below threshold. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.” These maps are known as the “location-based screening maps.” The OPR Technical Advisory also specifies that lead agencies, using more location specific information, may develop their own more specific information that includes more land uses. As such, the location-based screening maps are for residential uses (based on VMT per resident), employment uses (based on VMT per employee), and other uses (based on VMT/service population) that locate in a zone that has similar land uses to the proposed land use.

OPR updated the FAQ on their website to clarify “regional” as referring to the full geography within the jurisdictional borders of a metropolitan planning organization (MPO) or a regional transportation planning agency (RTPA). Therefore, analysis of VMT in the unincorporated County must include the entire SANDAG area, which for San Diego County includes both the unincorporated area, and incorporated cities.

2. Projects Located in a Transit Accessible Area

Projects located within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor¹ may be presumed to have a less than significant impact absent substantial evidence to the contrary. Note that Sprinter stations are considered major transit stops. This presumption may not apply if the project:

- Has a Floor Area Ratio of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the County.
- Is inconsistent with SANDAG’s most recent Sustainable Communities Strategy.
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Justification – The OPR Technical Advisory includes screening projects that are located near a major transit stop or near a stop along a high-quality transit corridor. Projects located near a major transit stop or near a stop along a high-quality transit corridor can help reduce VMT by increasing capacity for transit-supportive residential and/or employment densities in low VMT areas. The increased density that is associated with projects near high quality transit can increase transit ridership and therefore justify enhanced transit service which would in turn increase the amount of destinations that are accessible by transit and further increase transit ridership and decrease VMT.

3. Locally Serving Retail

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

Justification – The OPR Technical Advisory provides that “because new retail development typically redistributes shopping trips rather than creating new trips,² estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project’s transportation impacts.” Local serving retail generally shortens trips as longer trips from regional retail are redistributed to new local retail.

¹ Major transit stop: 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 (PRC § 21064.3). High quality transit corridor: A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute periods (PRC § 21155).

² Lovejoy, et al., Measuring the impacts of local land-use policies on vehicle miles of travel: The case of the first big-box store in Davis, California, The Journal of Transport and Land Use, 2013.

4. Locally Serving Public Facilities and Other Uses

Public facilities that serve the surrounding community or public facilities that are passive use may be presumed to have a less than significant impact absent substantial evidence to the contrary. These do not include facilities or uses that would attract users from outside the vicinity of the use.

Justification – Similar to local serving retail, local serving public facilities would redistribute trips and would not create new trips. Thus, similar to local serving retail, trips are generally shortened as longer trips from a regional facility are redistributed to the local serving public facility.

5. Redevelopment Projects with Greater VMT Efficiency

Where a project replaces existing VMT-generating land uses, the project may be presumed to have a less than significant impact if the total project VMT is less than the existing land use's total VMT, absent substantial evidence to the contrary.

Justification – Consistent with the OPR Technical Advisory, “where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described (in the OPR Technical Advisory) should apply.”

The OPR Technical Advisory states “If a residential or office project leads to a net increase in VMT, then the project's VMT per capita (residential) or per employee (office) should be compared to thresholds recommended above. Per capita and per employee VMT are efficiency metrics, and, as such, apply only to the proposed project without regard to the VMT generated by the previously existing land use.”

Per the OPR Technical Advisory, if the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact.

6. Affordable Housing

An affordable housing project may be presumed to have a less than significant impact absent substantial evidence to the contrary if 100% of units are affordable.

Justification – Affordable residential projects generate fewer trips than market rate residential projects³. The OPR Technical Advisory also states that “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”. Project by project

³ Newmark and Hass, “Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy”, The California Housing Partnership (2015).

justification is necessary to demonstrate that an affordable housing project is expected to generate less VMT if it is not 100 percent affordable or not located in an infill location. A project located in a suburban context or in a village context within the county can be considered an infill location because those locations represent the areas within the county that have the most compact land use pattern (as compared to rural areas).

Thresholds

If a project is required to complete a VMT analysis, the project's transportation impacts under CEQA would be significant if the project's VMT exceeds the thresholds below.

1. Residential

Threshold – Fifteen percent below the Regional average VMT per resident.

Justification – The OPR Technical Advisory provides that “residential development that would generate vehicle travel that is 15 percent or more below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact.” OPR notes that this was intended to achieve general consistency with both the Caltrans Statewide target for VMT reduction (15 percent by 2020) and the urban regional targets for greenhouse gas (GHG) emissions reductions established under SB 375 (13-16 percent for passenger vehicles by 2035). The County defines their region as the entire San Diego County region, including the incorporated cities.

2. Employment (Office/Commercial/Industrial)

Threshold – Fifteen percent below Regional County average VMT per employee.

Justification – The OPR Technical Advisory provides that “office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact.” VMT per employee is an appropriate metric for commercial and industrial projects in addition to office projects since the SANDAG regional travel demand model includes employment uses as a broad category. In addition, commercial and industrial projects are similar to an office land use in that the majority of the VMT is generated by employees.

3. Regional Retail/Service

Threshold – A net increase in total area VMT or 15 percent below the Regional County average VMT per service population

Justification – The threshold for retail/service projects within the County is consistent with the OPR Technical Advisory supplemented with the VMT per service population metric as appropriate. The service population metric provides a supplemental metric that captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT.

The service population metric allows for comparison of the VMT efficiency of retail projects against all other land uses in the unincorporated county. Using 15 percent below the Regional average as the threshold holds retail projects to a similar expectation of

VMT efficiency justified above for VMT per employee and VMT per capita. Supplementing the OPR Technical Advisory recommended retail threshold with the service population metric captures all VMT associated with a project by including VMT associated with trips entering or exiting the modelling region, allowing for full accounting of project VMT.

4. Mixed Use

Mixed Use projects contain a multiple land uses as a part of one project, such as residential, office, and retail.

Threshold – Fifteen percent below the County regional average VMT per Resident and Employee for each project component evaluated per the appropriate metric based on land use type.

Justification – Evaluating each component of the project based on their land use type is consistent with the OPR Technical Advisory. Using 15 percent below the Regional average as the threshold holds mixed use projects to the same expectation of VMT efficiency.

5. Regional Recreational

Threshold – A net increase in total regional VMT

Justification – The threshold for regional recreational projects within the County is consistent with the OPR Technical Advisory (applying the recommendations for regional retail uses)

6. Regional Public Facilities

Threshold – A net increase in total regional VMT

Justification – Regional public facilities within the County can be analyzed consistent with the OPR technical advisory (applying the recommendations for regional retail uses) by measuring the net change in regional VMT.

Appendix H: County General Plan Goals and Climate Action Plan Strategies Related to Transportation

County General Plan Goals and Climate Action Plan Strategies Related to Transportation

The County adopted an update to its General Plan in 2011. The General Plan serves as the legal underpinning for land use decisions and is the County's vision about how the unincorporated area will grow. The term "element" refers to the topics that California law requires be covered in a general plan. In addition to the mobility element (sometimes called a circulation element), the other elements required in California include land use, housing, conservation, open space, noise, safety, and environmental justice for cities and counties with identified disadvantaged communities. Each of these provide a framework for analysis of transportation impacts that support the new method of CEQA analysis, while some will require an analysis outside of CEQA.

Land Use Element

The land use plan and development doctrine that sustain the intent and integrity of the Community Development Model and the boundaries between Regional Categories describes the overarching primacy of the Land Use Element. VMT efficient areas would be located along the western edge of the unincorporated areas by providing streamlining for villages within the County Water Authority boundary and closer to the employment and services centers in the unincorporated areas. Here are key Land Use Policies that influence transportation analysis.

Goal LU-5 Climate Change and Land Use. Incorporate a mixture of uses within Villages and Rural Villages and plan residential densities at a level that support multi-modal transportation, including walking, bicycling, and the use of public transit, when appropriate. This is to support a reduction of vehicle trips within communities.

Goal LU-9 Distinct Villages and Community Cores. In villages, encourage future residential developments to achieve planned densities through multi-family, mixed use, and small-lot single-family projects that are compatible with community character.

Mobility Element

The Mobility Element includes several components including a description of the County's goals and policies that address the safe and efficient operation, as well as maintenance and management of the transportation network. The Mobility Element framework provides for a balanced, multi-modal transportation system for the movement of people and goods within the unincorporated areas of the County of San Diego. General Plan Policy M-2.1 requires a LOS D or higher for all roads. Criteria were established for 'Accepting a Road Classification with a LOS E and LOS F' when specific issues of community character or environmental constraints were considered. The buildout of the General Plan Mobility Element was estimated to have planning level costs of \$2.39 Billion, a reduction of \$4.4 Billion from the previous General Plan. The road network in the Mobility Element was studied in the General Plan Program EIR through impacts on LOS. Mitigation measures identified in the Program EIR were the goals and policies in the Mobility and Land Use Elements, as well as a required update to the Transportation Impact Program. On October 31, 2012, the Board adopted updates to the Transportation Impact Fee to implement the Mobility Element for the General Plan. The update overall reduced residential impact fees by 46% and commercial impact fees by 75%. The TIF is estimated to pay \$535 Million towards the \$2.39 Billion estimated to build out the Mobility Element. Implementation of

the remaining Mobility Element would occur overtime to be paid for by private development, through State or Federal funds, grants, or the County's General Fund.

Here are key County General Plan Mobility Element Goals that direct how transportation analysis is performed to facilitate the implementation of the County General Plan vision:

Goal M1- A Balanced Road Network. A safe and efficient road network that balances regional travel needs with the travel requirements and preferences of local communities.

Goal M2 – Responding to Physical Constraints and Preservation Goals. Level of Service Criteria. Require development projects to provide associated road improvements necessary to achieve a level of service of “D” or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County.

Goal M3 – Transportation Facility Development. New or expanded transportation facilities that are phased with and equitably funded by the development that necessitates their construction.

GOAL M4 – Safe and Compatible Roads. Roads designed to be safe for all users and compatible with their context.

GOAL M5 – Safe and Efficient Multi-Modal Transportation System. A multi-modal transportation system that provides for the safe, accessible, convenient, and efficient movement of people and goods within the unincorporated county.

GOAL M6 – Efficient Freight Service Linked to Other Transportation Modes. Freight services that efficiently move goods and that are effectively linked to other transportation modes.

GOAL M8 – Public Transit System. A public transit system that reduces automobile dependence and serves all segments of the population.

GOAL M9 – Effective Use of Existing Transportation Network. Reduce the need to widen or build roads through effective use of the existing transportation network and maximizing the use of alternative modes of travel throughout the County.

GOAL M10 – Parking for Community Needs. Parking regulations that serve community needs and enhance community character.

GOAL M11 – Bicycle and Pedestrian Facilities. Bicycle and pedestrian networks and facilities that provide safe, efficient, and attractive mobility options as well as recreational opportunities for County residents.

GOAL M12 – County Trails Program. A safe, scenic, interconnected, and enjoyable non-motorized multi-use trail system developed, managed, and maintained according to the County Trails Program, Regional Trails Plan, and the Community Trails Master Plan.

The County adopted an Active Transportation Plan in October 2018 that updated the County's standards for bicycle facilities and classifications and included a Pedestrian Gap Analysis appendix that identifies potential sidewalk and pathway improvements in villages throughout the county. The updated bicycle facility classifications are included in

the Mobility Element Appendix maps of the General Plan. The Board of Supervisors also adopted a Complete Streets Policy (J-38) along with the adoption of the Active Transportation Plan.

In recognition of SB 743 and new CEQA requirements for VMT analysis, and to ensure consistency with the County's General Plan Goals and Policies, the TSG includes criteria for properly assessing and mitigating VMT within the county, as well as procedures and methods for analyzing and identifying specific improvements to maintain LOS standards, and to address the safety and operations of the transportation system for all users.

Housing Element

The Housing Element objectives include improving housing affordability, assigning densities based on characteristics of the land, and locating growth near infrastructure, services and jobs. A key Housing Element Policy that influences transportation analysis is:

Goal H-1.3 Housing Near Public Services. Maximize housing in areas served by transportation networks, within close proximity to job centers, and where public services and infrastructure are available.

Conservation Open Space Element

There is a strong correlation between land use planning, transportation system planning, and the emission of air quality pollutants, GHG that contribute to global climate change. The General Plan recognized that the primary opportunities to reduce air quality pollutants and GHG emissions are in the urbanized areas of the County where there are land use patterns that can best support the increased use of transit and pedestrian activities since most GHGs and air pollutants result from mobile source emissions. The General Plan notes, "the unincorporated county can also be part of the solution by producing development patterns that contribute to reducing the dependence on the automobile and by promoting development with lower energy demands...A holistic approach to achieving sustainable communities requires the integration of a regionwide multi-modal transportation system with a significant reliance on single-occupant motor vehicles, along with buildings that consume less through design and efficient building materials." A key conservation element that influences transportation analysis is:

Goal COS-14 Sustainable Land Development. Land use development techniques and patterns that reduce emissions of criteria pollutants and GHGs through minimized transportation and energy demands, while protecting public health and contributing to a more sustainable environment.

Climate Action Plan

The County Climate Action Plan (CAP), adopted in February 2018, and the County Active Transportation Plan (ATP), adopted in October 2018, also support the intent of SB 743. Light duty vehicle emissions constitute approximately 43% of the total unincorporated GHG emissions. The CAP has two GHG emissions reduction strategies related to VMT, which reduce 40,673 metric tons of GHG emissions (about 2.7% of the amount emitted by on-road transportation in the unincorporated county). CAP Strategies T-1 and T-2 focus on reducing VMT and shifting towards alternative modes of transportation, focusing density in unincorporated villages, conserving open space and agricultural lands, and implementing infrastructure improvements to provide for active

transportation. A transportation demand management (TDM) ordinance, being developed as a measure of the CAP, will be an important tool for non-residential projects to use when mitigating VMT impacts while also reducing GHG emissions. The CAP and ATP identify capital improvements related to pedestrian and bicycle infrastructure improvements that SB 743 mitigations could fund in the future.

Strategy T-1: Reduce Vehicle Miles. This strategy focuses on preserving open space and agricultural lands, and focusing density in the county villages. Conservation efforts will avoid GHG emissions from transportation and energy use associated with conveyance of water and solid waste services. Reductions in Vehicle Miles Traveled (VMT) resulting from this strategy will also improve air quality through reduced vehicle emissions and contribute to public health improvements by creating opportunities for active transportation choices.

Strategy T-2: Shift Towards Alternative Modes of Transportation. This strategy focuses on implementing infrastructure improvements to promote active transportation, and understanding commuters' transportation decisions in order to help people use the infrastructure in place for transit, ridesharing, walking, biking, and telework. The strategy also includes measures that sets performance standards for reducing employee commute trips at County facilities, parking management, and focusing development in the county villages. Reducing transportation emissions has a beneficial effect of improving public and community health through both enhanced air quality and mobility, and cost savings for community members by reducing fuel use.